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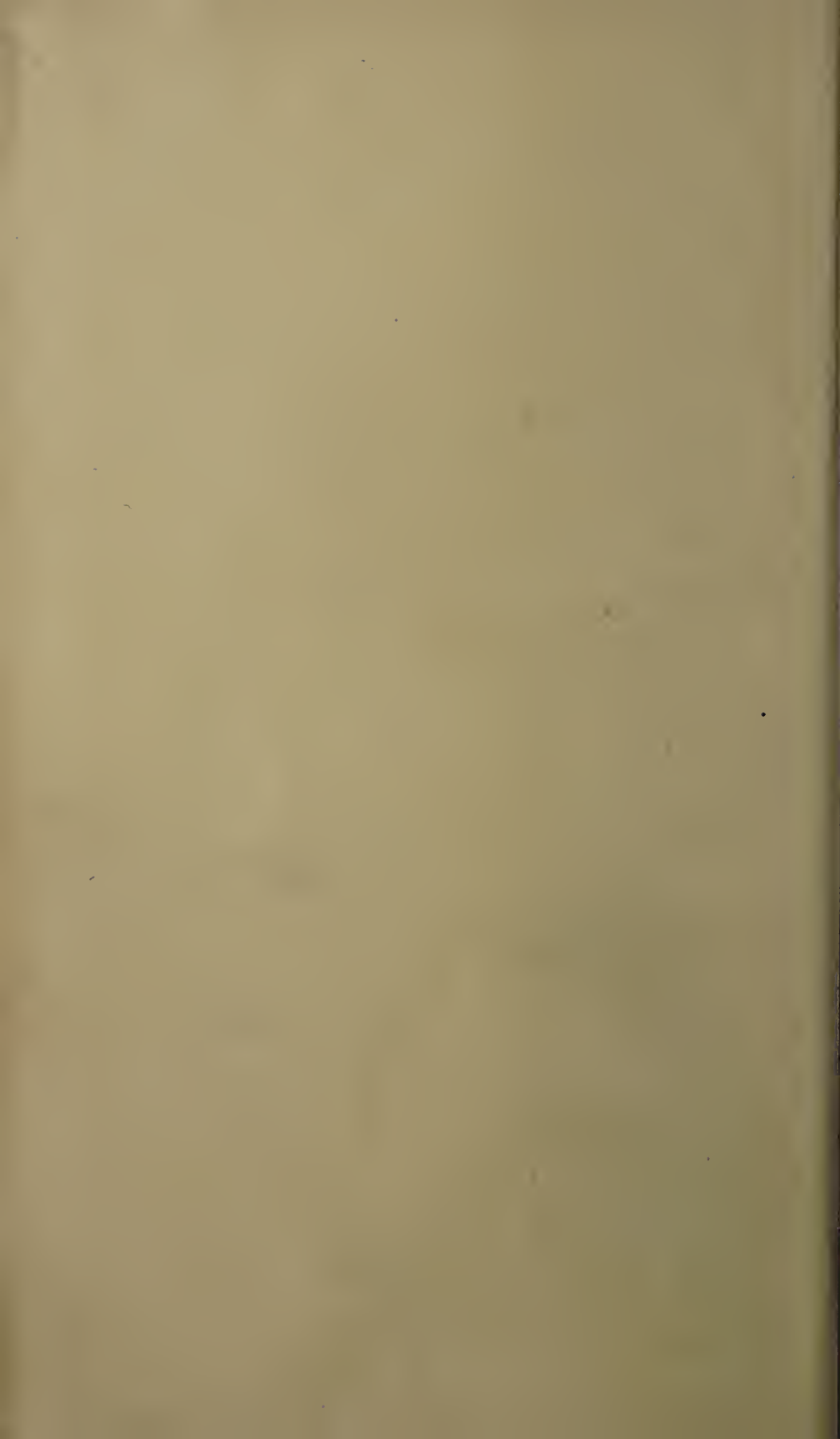


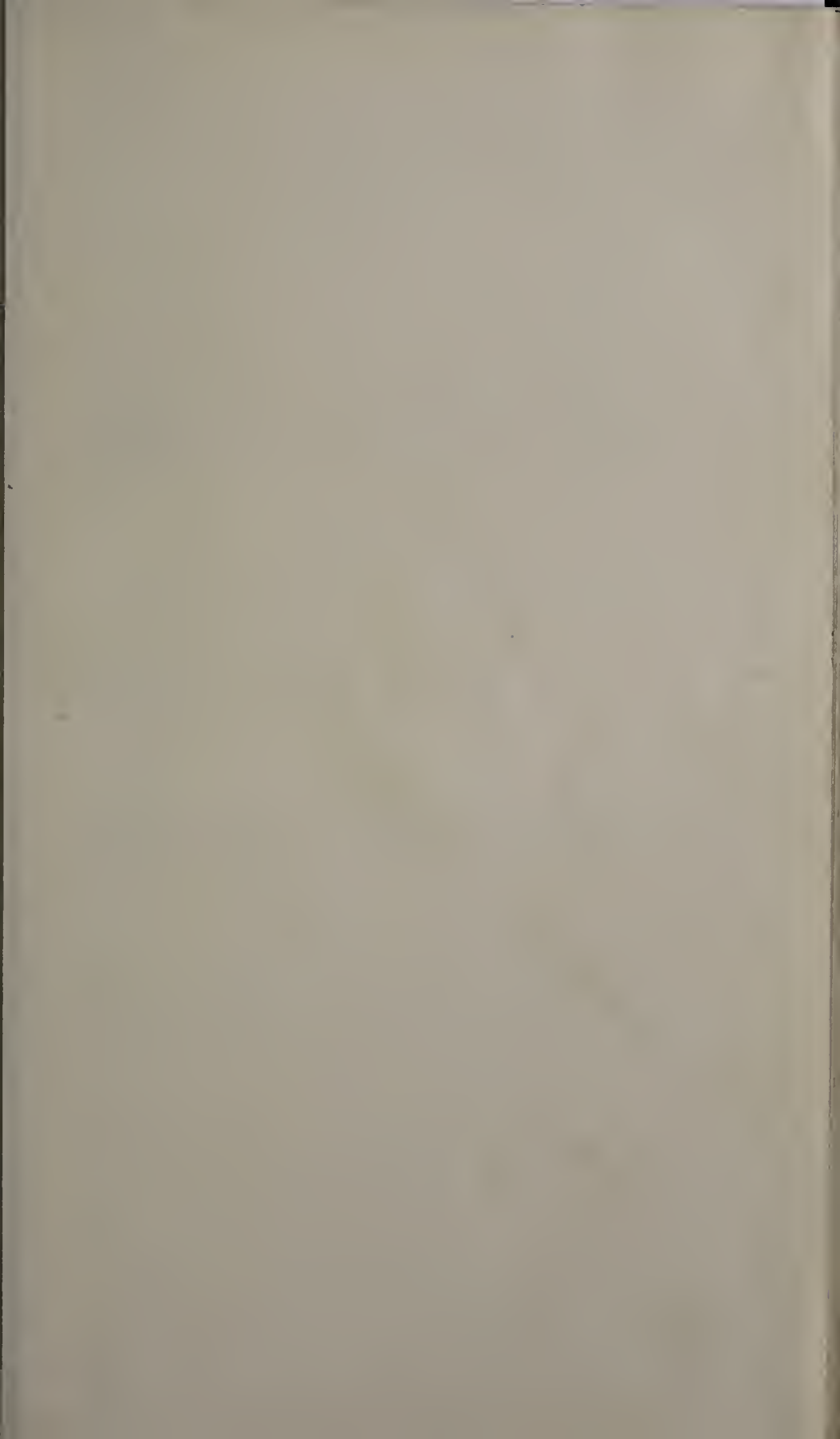






\$3500





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LIST

OF

Spur, Bevel, Mitre Wheel,

PULLEY,

PROPELLER WHEEL,

GRATE BAR

AND

**OTHER PATTERNS,**

BELONGING TO

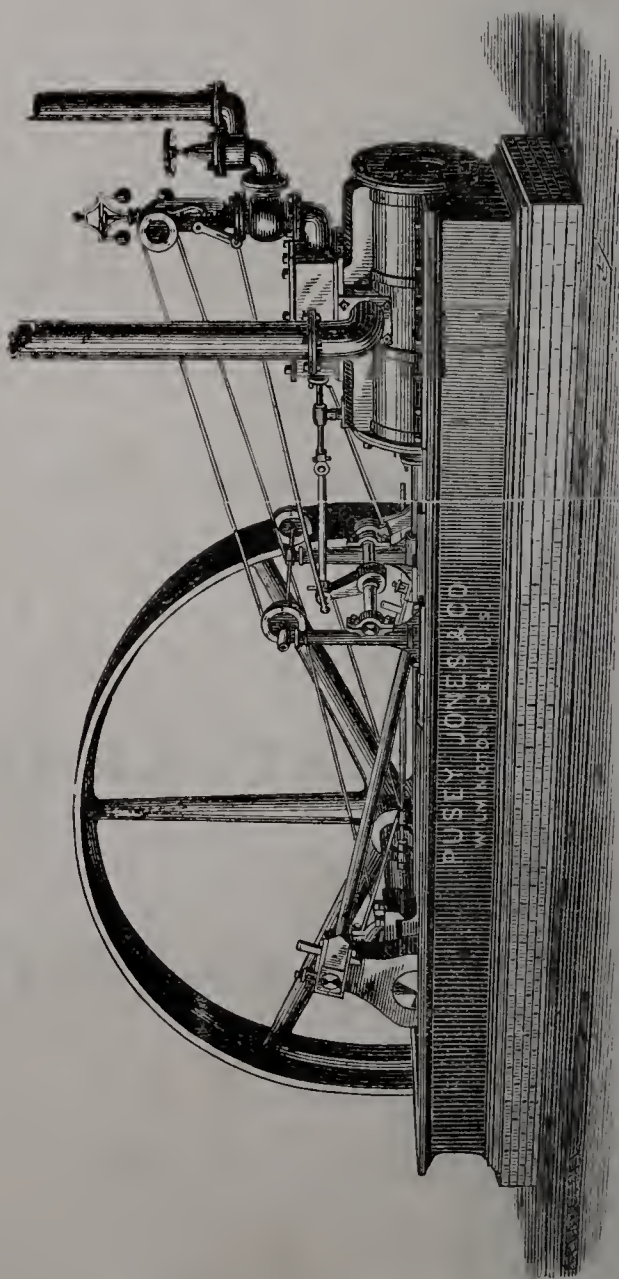
**THE PUSEY & JONES COMPANY,**

OF

WILMINGTON, DEL.

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1881.



## THE PUSEY & JONES COMPANY, WILMINGTON, DEL.

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The subscribers are prepared to furnish, of the best and most suitable material, Iron and Brass Castings of any size, weight or description. The prices shall not exceed those of other reputable establishments.

Besides the many patterns herein enumerated, they have complete sets of patterns for

High and Low Pressure Marine Engines,  
Stationary Engines, Portable Engines,  
Gang Saw Mills,  
Single, Muley and Circular Saw Mills,  
Fourdrinier Paper Machines,  
Cylinder Paper Machines,  
Machinery of all kinds for Paper Mills,  
Rolling Mills, Powder Mills, Flour Mills, &c.;

ALSO, A LARGE VARIETY OF

Punching and Shearing Machines,  
Vertical and Horizontal Punches,  
Boiler Plate Shears, Rotary Shears,  
Bar Iron Cutters,  
Cranes, Hoisting Machines, &c.

They are the sole manufacturers of Tremper's Patent Cut-off and Governors, a full supply of which they keep constantly on hand.

Brass Castings from ordinary patterns can be furnished a few hours after receipt of order. Particular attention given to Paper Mill Work, covering Press Rolls with Brass Casings,&c.

They also have a Steam Forge which enables them to furnish hammered iron shafts of any ordinary diameter and length, and forgings of any description, at short notice. The substitution of hammered iron shafts for cast iron is in many cases the only way to obtain the necessary strength. Having great facilities for doing Machine Work, they are prepared to execute orders with promptness and at reasonable prices. Parties ordering Castings should particularly state if they wish any machine work done to them, and give definite and accurate instructions in regard thereto. To prevent delay and disappointment they should be very particular in this respect.

The sizes of Wheel Patterns in this list are measured from the pitch line ; the castings will be one-eighth of an inch per foot less than the patterns. The sizes of the Pulley patterns are what the castings will be after they are turned for belts ; the size of the eye needed must always be sent with an order for a Wheel or Pulley.

The Wheel patterns are kept in good order and renewed as occasion requires ; the Pulley patterns are all made of iron and are turned up perfectly true.

Machine Moulded Gearing, of any required dimensions, will be furnished if desired. Wheels made in this manner, are equally as true as cut gears, and more durable.

This list is designed for general gratuitous circulation, and will be given or sent by mail to any applicant.

THE PUSEY & JONES COMPANY,

Wilmington, Delaware.

## SPUR WHEELS.

 $4\frac{1}{2}$  INCH PITCH.

No.	Diameter.		Cogs.	Face.	Remarks.
	FT.	IN.		INCHES	
99	2	$7\frac{3}{4}$	22	$3\frac{1}{2}$	
100	2	2	18	$3\frac{1}{2}$	
117	1	$8\frac{3}{4}$	14	$4\frac{1}{2}$	
549	4	$9\frac{7}{8}$	40	14	
555	3	$7\frac{1}{2}$	30	14	
563	1	11	16	$4\frac{1}{2}$	
599	7	$5\frac{3}{4}$	62	14	
601	3	$0\frac{1}{4}$	25	15	
704	2	$5\frac{3}{4}$	21	15	

 $4\frac{3}{8}$  INCH PITCH.

705	2	$1\frac{3}{8}$	18	13
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## SPUR WHEELS.

 $4\frac{1}{4}$  INCH PITCH.

No.	Diameter.		Cogs.	Face.	Remarks.
	FT.	IN.		INCHES	
102	2	$3\frac{3}{8}$	20	4	
128	1	$7\frac{1}{4}$	14	4	
379	1	$4\frac{1}{2}$	12	4	
554	2	$11\frac{1}{2}$	26	5	
569	2	$8\frac{3}{4}$	24	4	
721	1	$4\frac{1}{2}$	12	$10\frac{1}{4}$	

 $4\frac{1}{16}$  INCH PITCH.

797	1	10	17	14	
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## SPUR WHEELS.

4 INCH PITCH.

No.	Diameter.		Cogs.	Face.	Remarks.
	FT.	IN.		INCHES	
91	2	2 $\frac{3}{4}$	21	5	
146	1	7 $\frac{1}{2}$	15	3	
205	1	6	14	5	
241	1	3 $\frac{1}{2}$	12	6	
245	1	6	14	6	
250	1	8 $\frac{3}{4}$	16	5	
280	2	8	25	5	
292	1	9 $\frac{3}{4}$	17	5	
324	1	11	18	5	
503	2	4 $\frac{3}{8}$	22	10	
510	6	5 $\frac{1}{4}$	60	10	
511	5	1 $\frac{3}{4}$	48	11	
512	3	5 $\frac{1}{4}$	32	11	
513	2	2	20	10	
518	11	2	104	10	Seg. and arms.
541	11	1 $\frac{3}{4}$	104	10	
542	2	10 $\frac{3}{4}$	27	10	
543	12	0	112	11	
544	6	0 $\frac{1}{4}$	56	11	
545	4	8 $\frac{3}{4}$	44	10	
594	2	5 $\frac{3}{4}$	23	10	
798	1	1 $\frac{1}{8}$	10	9	Shrouded.
799	1	3 $\frac{1}{2}$	12	11 $\frac{1}{2}$	

## SPUR WHEELS.

 $3\frac{1}{16}$  INCH PITCH.

No.	Diameter.		Cogs.	Face.	Remarks.
	FT.	IN.		INCHES	
382	2	$8\frac{3}{4}$	26	$5\frac{1}{2}$	Mortise.
540	2	$8\frac{3}{4}$	26	5	

 $3\frac{3}{4}$  INCH PITCH.

59	1	$3\frac{1}{2}$	13	5
64	1	6	15	4
136	2	$10\frac{5}{8}$	29	5
150	1	$1\frac{1}{4}$	11	5
385	1	$9\frac{3}{4}$	18	4
580	1	$0\frac{1}{4}$	10	5

 $3\frac{9}{16}$  INCH PITCH.

722	1	$7\frac{1}{4}$	17	5
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## SPUR WHEELS.

 $3\frac{1}{2}$  INCH PITCH.

No.	Diameter.		Cogs.	Face.	Remarks.
	FT.	IN.		INCHES	
60	1	6	16	7	
65	1	5	15	5	
96	1	$9\frac{3}{8}$	19	4	
120	1	6	16	$4\frac{1}{2}$	
129	1	$9\frac{1}{2}$	19	3	
140	2	$9\frac{1}{2}$	30	$6\frac{1}{2}$	
182	4	$8\frac{1}{2}$	52	$3\frac{1}{2}$	Mortise.
183	1	7	17	$3\frac{1}{2}$	
190	2	$0\frac{3}{4}$	22	7	
203	2	$1\frac{5}{8}$	23	6	
243	1	$8\frac{1}{4}$	18	$3\frac{1}{2}$	
293	1	$11\frac{1}{2}$	21	$3\frac{1}{2}$	
297	1	7	17	4	
323	2	$11\frac{3}{4}$	32	6	
389	1	$0\frac{1}{2}$	11	$4\frac{1}{2}$	
395	3	$6\frac{3}{4}$	38	9	
396	1	$9\frac{3}{8}$	19	9	
539	2	$4\frac{1}{4}$	25	$4\frac{1}{2}$	
703	1	$0\frac{3}{4}$	11	12	
747	1	$4\frac{1}{2}$	15	10	
758	1	5	15	$10\frac{1}{2}$	
786	6	$11\frac{1}{2}$	75	8	
787	6	$11\frac{1}{2}$	75	8	Mortise.
800	1	5	15	$8\frac{3}{4}$	
801	1	$2\frac{3}{4}$	13	$8\frac{3}{4}$	
802	5	$0\frac{3}{4}$	54	6	
803	2	$6\frac{1}{4}$	27	12	Mortise.

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## SPUR WHEELS.

 $3\frac{3}{8}$  INCH PITCH.

No.	Diameter.		Cogs.	Face.	Remarks.
	FT.	IN.		INCHES	
28	1	7	17	$4\frac{3}{4}$	Segment.
186	17	$4\frac{1}{4}$	192	7	
187	2	$6\frac{3}{8}$	28	7	
702	1	4	15	$10\frac{1}{2}$	

 $3\frac{1}{4}$  INCH PITCH.

38	1	$7\frac{3}{4}$	19	5	Segment.
40	3	$3\frac{1}{4}$	38	$5\frac{1}{2}$	
53	2	$0\frac{1}{2}$	23	5	
62	1	9	20	$4\frac{1}{2}$	
103	2	$10\frac{1}{4}$	33	$5\frac{1}{2}$	
105	3	$2\frac{3}{4}$	37	5	
116	2	2	25	$4\frac{1}{2}$	
119	4	1	47	$4\frac{1}{2}$	
127	1	$5\frac{3}{4}$	17	$3\frac{1}{2}$	
211	2	0	23	4	
268	12	4	144	5	
269	2	$7\frac{1}{4}$	30	5	
281	1	$4\frac{3}{4}$	16	$4\frac{1}{2}$	
282	16	$7\frac{1}{2}$	192	$4\frac{1}{2}$	
441	2	0	23	5	Segment.

## SPUR WHEELS.

 $3\frac{3}{16}$  INCH PITCH.

No.	Diameter.		Cogs.	Face.	Remarks.
	FT.	IN.			
464	1	$5\frac{1}{4}$	17	4	Mortise.
560	1	$7\frac{1}{2}$	19	$3\frac{1}{2}$	Mortise.

 $3\frac{1}{8}$  INCH PITCH.

23	2	$6\frac{1}{2}$	30	$4\frac{1}{2}$	Segment.
58	1	7	19	5	
66	1	0	12	$6\frac{1}{2}$	
98	2	$4\frac{1}{4}$	28	5	
101	3	0	36	5	
175	1	11	23	3	
185	2	8	32	$6\frac{1}{2}$	
198	12	8	152	$4\frac{7}{8}$	
229	2	1	25	6	
231	10	0	120	5	
244	2	11	35	6	
260	1	10	22	6	
286	1	5	17	5	
804		$10\frac{1}{8}$	10	$11\frac{3}{4}$	

## SPUR WHEELS.

3 INCH PINCH.

No.	Diameter		Cogs.	Face.	Remarks.
	FT.	IN.		INCHES	
12	9	7	120	$5\frac{1}{2}$	Segment.
13	2	$2\frac{1}{4}$	27	$5\frac{1}{2}$	
14	2	$1\frac{3}{4}$	26	$5\frac{1}{2}$	
37	3	6	44	5	
43	2	$10\frac{1}{2}$	36	$5\frac{1}{2}$	
52	1	$2\frac{1}{2}$	15	$2\frac{1}{2}$	
61	2	0	25	$5\frac{1}{2}$	
93	1	$0\frac{1}{2}$	13	$3\frac{1}{2}$	
95	3	$0\frac{5}{8}$	38	6	
104	0	$11\frac{1}{2}$	12	5	
113	1	$7\frac{1}{4}$	20	$4\frac{1}{4}$	
114	3	6	44	4	
118	2	$11\frac{3}{4}$	37	6	
147	9	$7\frac{1}{2}$	120	5	Mortise.
148	2	$6\frac{3}{4}$	32	5	
153	1	$1\frac{1}{2}$	14	5	
154	1	9	22	4	
176	5	9	72	$5\frac{1}{2}$	Mortise.
197	2	$6\frac{3}{4}$	32	$8\frac{1}{2}$	
219	8	4	104	6	Segment.
220	2	$8\frac{5}{8}$	34	6	
227	14	8	184	$7\frac{1}{2}$	Segment.
228	5	$0\frac{1}{2}$	63	$7\frac{1}{2}$	
256	8	8	108	6	Segment.
279	1	$5\frac{1}{4}$	18	6	
290	3	$2\frac{1}{4}$	40	$5\frac{1}{2}$	
309	18	3	228	10	
310	4	$9\frac{3}{4}$	60	10	Segment.
356	8	8	108	6	
359	3	7	45	$8\frac{1}{8}$	Segment.
426	14	0	176	5	

## SPUR WHEELS.

3 INCH PITCH.

No.	Diameter.		Cogs.	Face.	Remarks.
	FT.	IN.		INCHES	
490	1	$5\frac{3}{8}$	18	8	
505	3	$2\frac{1}{2}$	40	10	
506	2	0	25	10	
508	1	$11\frac{1}{4}$	24	5	
562	1	$9\frac{1}{4}$	22	6	
583	6	$0\frac{1}{4}$	75	12	Mortise.
584	5	$1\frac{3}{4}$	64	12	
591	1	$6\frac{1}{2}$	19	4	
697	1	11	24	$6\frac{1}{2}$	
698	2	3	28	8	
699	2	2	27	8	
700	2	$1\frac{1}{8}$	26	6	
701	2		25	6	
723	2	$8\frac{5}{8}$	34	6	
724	2	$11\frac{3}{4}$	37	6	
748		$8\frac{3}{4}$	9	$10\frac{7}{8}$	

## SPUR WHEELS.

 $2\frac{7}{8}$  INCH PITCH.

No.	Diameter.		Cogs.	Face.	Remarks.
	FT.	IN.		INCHES	
6	13	10	180	5	Segment.
7	3	7	47	5	
8	1	9	23	5	
29	3	$5\frac{1}{2}$	45	$7\frac{1}{2}$	
30	1	$8\frac{1}{2}$	22	$7\frac{1}{2}$	
50	2	$3\frac{3}{4}$	30	5	Mortise.
51	1	$5\frac{1}{2}$	20	$7\frac{1}{2}$	
89	8	$1\frac{1}{2}$	104	6	
90	2	3	29	6	
108	11	$2\frac{3}{4}$	150	$4\frac{1}{2}$	Segment.
109	1	$11\frac{1}{2}$	26	$4\frac{1}{2}$	
124	0	$9\frac{3}{8}$	11	3	
166	1	$2\frac{3}{4}$	16	3	
194	2	$3\frac{1}{2}$	30	$7\frac{1}{2}$	Mortise.
386	2	$9\frac{1}{2}$	36	7	
456	2	$7\frac{1}{2}$	34	7	
517	10	$1\frac{1}{2}$	132	$7\frac{1}{2}$	Segment. Seg. and arms.
538	9	$10\frac{3}{4}$	128	7	
578	3	$1\frac{7}{8}$	41	$7\frac{1}{2}$	

## SPUR WHEELS.

 $2\frac{1}{16}$  INCH PITCH.

No.	Diameter.		Cogs.	Face.	Remarks.
	FT.	IN.		INCHES	
2	1	$3\frac{1}{8}$	17	4	Segment.
115	2	$0\frac{1}{2}$	27	4	
130	3	$3\frac{3}{4}$	43	$4\frac{1}{2}$	
332	10	10	144	4	
725		$11\frac{3}{4}$	13	$8\frac{3}{8}$	

 $2\frac{3}{4}$  INCH PITCH.

3	14	5	197	4	Segment.
5	2	$8\frac{1}{2}$	36	$5\frac{1}{2}$	Segment.
9	10	0	136	$7\frac{1}{2}$	
10	5	0	68	$7\frac{1}{2}$	
11	2	$2\frac{3}{4}$	30	$7\frac{1}{2}$	
27	3	0	41	$5\frac{3}{4}$	
35	1	$9\frac{5}{8}$	25	6	Segment.
41	2	$7\frac{3}{4}$	36	$4\frac{1}{2}$	
48	11	8	160	$7\frac{1}{2}$	
49	4	$2\frac{3}{4}$	57	$7\frac{1}{2}$	
63	1	$8\frac{1}{2}$	23	6	
77	9	6	130	4	Segment.
86	2	0	27	$7\frac{1}{2}$	Segment.
94	1	$7\frac{1}{2}$	22	4	
111	5	6	75	4	
112	2	$0\frac{3}{4}$	28	4	
123	1	3	17	4	
133	2	$6\frac{3}{4}$	35	5	

## SPUR WHEELS.

 $2\frac{3}{4}$  INCH PITCH.

No.	Diameter.		Cogs.	Face.	Remarks.
	FT.	IN.		INCHES	
134	5	$1\frac{1}{2}$	70	5	
143	5	$3\frac{1}{4}$	72	$7\frac{1}{2}$	
151	1	$7\frac{3}{4}$	22	5	
159	2	$6\frac{3}{4}$	35	$7\frac{1}{2}$	
165	1	$5\frac{3}{4}$	20	4	
172	3	9	51	$7\frac{1}{2}$	
191	5	8	76	4	Mortise.
192	9	4	128	$7\frac{1}{2}$	Segment.
193	3	$1\frac{3}{4}$	43	$7\frac{1}{2}$	
201	13	10	192	8	Segment.
202	6	$0\frac{1}{2}$	83	8	
206	6	5	88	6	Mortise.
207	1	$8\frac{1}{4}$	23	7	
216	11	$1\frac{1}{2}$	152	7	Segment.
217	3	$2\frac{1}{2}$	44	7	Mortise.
218	2	$8\frac{1}{2}$	37	7	
221	12	11	176	5	Segment.
230	1	$2\frac{1}{2}$	16	4	
233	16	8	228	4	Segment.
234	3	0	41	4	
240	5	10	80	$3\frac{1}{2}$	Segment.
248	7	$7\frac{1}{2}$	104	8	
249	3	$6\frac{1}{2}$	48	8	
264	13	$5\frac{1}{2}$	184	$4\frac{1}{2}$	Segment.
275	8	0	112	4	Segment.
291	15	9	196	$4\frac{1}{2}$	Segment.
322	3	$6\frac{1}{4}$	48	$3\frac{1}{2}$	Mortise.
325	0	$10\frac{3}{4}$	12	4	
327	1	$6\frac{1}{2}$	21	$8\frac{1}{2}$	
333	11	$5\frac{3}{4}$	156	4	Segment.
334	4	6	61	4	

## SPUR WHEELS.

 $2\frac{3}{4}$  INCH PITCH.

No.	Diameter.		Cogs.	Face.	Remarks.
	FT.	IN.			
337	2	$2\frac{1}{2}$	30	7	
338	19	$2\frac{1}{4}$	259	$5\frac{1}{2}$	Segment.
343	18	$9\frac{1}{4}$	256	5	Segment.
347	1	$0\frac{1}{2}$	14	5	
364	3	$2\frac{1}{2}$	44	7	
365	1	$0\frac{3}{8}$	14	7	
373	20	$6\frac{1}{2}$	280	4	Segment.
378	6	7	90	7	
397	2	5	33	6	Mortise.
407	10	$6\frac{3}{4}$	144	4	Segment.
409	10	0	136	4	Mortise.
432	5	11	80	6	Segment.
434	1	10	25	4	
437	1	$3\frac{3}{4}$	18	6	
454	14	5	197	4	Segment.
468	12	0	168	6	Segment.
477	1	$10\frac{3}{4}$	26	6	Mortise.
577	6	$0\frac{1}{2}$	82	$8\frac{1}{2}$	
598	1	$11\frac{5}{8}$	27	12	
693	2	$4\frac{1}{4}$	32	7	
694	2	$3\frac{3}{8}$	31	7	
695	1	11	26	6	
696	1	$10\frac{3}{8}$	25	6	
726	1	$\frac{3}{8}$	14	7	
749	1	4	18	$8\frac{1}{4}$	
805		$10\frac{3}{4}$	12	$8\frac{3}{4}$	

## SPUR WHEELS.

 $2\frac{5}{8}$  INCH PITCH.

No	Diameter.		Cogs.	Face.	Remarks.
	FT.	IN.		INCHES	
26	4	0	57	5	
132	1	$11\frac{1}{2}$	28	5	
164	1	$6\frac{1}{2}$	22	5	
276	8	$2\frac{1}{4}$	117	4	Segment.
277	1	$8\frac{1}{4}$	24	4	
287	16	$5\frac{1}{2}$	240	5	Segment.
288	3	$8\frac{1}{2}$	54	5	
289	1	$8\frac{3}{4}$	25	5	
319	15	2	216	5	Segment.
320	2	9	39	5	
331	3	$1\frac{3}{4}$	45	4	
345	1	$7\frac{1}{4}$	23	6	
430	10	$4\frac{1}{4}$	148	4	Segment.
431	15	2	216	4	Segment.

 $2\frac{9}{16}$  INCH PITCH.

178	1	$2\frac{3}{4}$	18	4	
380	13	$1\frac{1}{2}$	192	7	Segment.
381	2	$11\frac{3}{8}$	43	7	

## SPUR WHEELS.

 $2\frac{1}{2}$  INCH PITCH.

No.	Diameter.		Cogs.	Face.	Remarks.
	FT.	IN.			
25	1	1	16	3	
36	2	$8\frac{1}{4}$	40	$4\frac{1}{2}$	
44	1	8	25	4	
45	1	$2\frac{3}{8}$	18	4	
46	3	$4\frac{3}{4}$	51	4	
47	11	2	168	4	Segment.
144	7	$6\frac{1}{4}$	112	$7\frac{1}{2}$	Mortise.
145	1	$6\frac{1}{2}$	23	$7\frac{1}{2}$	
152	1	$9\frac{3}{4}$	28	$6\frac{1}{4}$	
171	6	$9\frac{1}{2}$	102	4	Segment.
177	6	3	94	4	
196	8	6	128	$4\frac{1}{2}$	Segment.
213	6	5	96	6	Mortise.
215	1	$8\frac{1}{4}$	25	6	
222	2	$1\frac{1}{2}$	32	4	
237	1	$4\frac{3}{4}$	21	6	
261	12	3	184	5	Segment.
265	0	$9\frac{3}{4}$	12	$3\frac{1}{2}$	
266	12	0	180	$3\frac{1}{2}$	Segment.
267	1	$5\frac{1}{2}$	22	$3\frac{1}{2}$	
270	9	$7\frac{1}{2}$	144	6	Segment.
271	1	$10\frac{3}{4}$	28	6	
296	2	$4\frac{1}{2}$	36	4	
299	5	$7\frac{1}{4}$	84	6	
300	4	0	60	6	
303	2	$3\frac{3}{8}$	34	4	
304	14	$4\frac{1}{2}$	216	4	Segment.
305	19	$2\frac{1}{2}$	288	4	Segment.
311	12	8	192	6	Segment.
314	3	7	54	5	

## SPUR WHEELS.

 $2\frac{1}{2}$  INCH PITCH.

No.	Diameter.		Cogs.	Face.	Remarks.
	FT.	IN.		INCHES	
315	2	4	35	5	
317	6	6	98	6	
318	2	$3\frac{3}{4}$	34	6	
329	13	$10\frac{1}{2}$	208	5	Segment.
330	3	6	53	8	
351	18	3	272	4	Segment.
352	11	$9\frac{3}{4}$	178	$4\frac{1}{2}$	Segment.
353	9	6	140	5	Segment.
357	2	$10\frac{1}{4}$	42	6	
360	22	0	333	$4\frac{1}{2}$	Segment.
366	4	6	68	6	
370	1	$7\frac{1}{4}$	24	4	
374	4	$9\frac{1}{4}$	72	6	
375	3	$3\frac{3}{4}$	50	6	
383	0	$11\frac{1}{2}$	14	6	
384	2	8	40	$4\frac{1}{2}$	
391	17	2	256	4	Segment.
399	5	$10\frac{3}{8}$	88	6	
400	20	0	300	5	Segment.
410	16	0	240	4	Segment.
416	12	10	192	$4\frac{1}{2}$	Segment.
420	1	8	25	9	
425	1	$8\frac{3}{4}$	26	$6\frac{1}{2}$	
433	9	1	136	5	
436	8	0	120	5	Segment.
438	13	$5\frac{1}{4}$	200	$4\frac{1}{2}$	Segment.
446	21	$4\frac{1}{4}$	320	4	Segment.
448	4	6	68	6	Mortise.
449	8	9	132	7	
451	15	$3\frac{1}{2}$	230	$4\frac{1}{2}$	Segment.

## SPUR WHEELS.

 $2\frac{1}{2}$  INCH PITCH.

No.	Diameter.		Cogs.	Face.	Remarks.
	FT.	IN.		INCHES	
452	12	0	180	4	Segment.
453	10	$1\frac{3}{4}$	152	5	Segment.
455	2	$0\frac{3}{4}$	31	$6\frac{1}{2}$	
460	5	$11\frac{3}{4}$	90	6	Seg. and arms.
465	2	$1\frac{1}{2}$	32	$6\frac{1}{2}$	
467	15	7	234	4	Segment.
469	3	$0\frac{3}{4}$	46	7	
470	7	10	118	7	
472	5	11	90	6	Mortise.
474	22	$4\frac{1}{2}$	336	5	Segment.
475	10	$7\frac{7}{8}$	160	4	Segment.
476	2	0	30	6	
480	17	$5\frac{1}{2}$	262	$4\frac{1}{2}$	Segment.
482	5	$5\frac{3}{8}$	81	6	
483	4	$6\frac{1}{8}$	67	6	
493	6	8	100	6	
495	18	3	272	5	Segment.
496	5	1	76	6	
498	0	5	6	$4\frac{1}{4}$	
499	6	0	90	6	
509	1	$2\frac{1}{2}$	18	6	
514	16	$3\frac{1}{2}$	242	$4\frac{1}{2}$	Segment.
515	6	5	96	6	
516	1	$4\frac{3}{4}$	21	$6\frac{1}{2}$	
519	1	$6\frac{3}{4}$	23	7	
520	7	$0\frac{1}{4}$	105	6	Mortise.
521	2	$10\frac{5}{8}$	43	$6\frac{1}{2}$	
523	16	$7\frac{1}{2}$	246	$4\frac{1}{2}$	Segment.
525	10	$0\frac{1}{2}$	152	7	Seg. and arms.
526	1	$6\frac{1}{2}$	23	$7\frac{1}{2}$	
528	2	0	30	$6\frac{1}{2}$	

## SPUR WHEELS.

 $2\frac{1}{2}$  INCH PITCH.

No.	Diameter.		Cogs.	Face.	Remarks.
	FT.	IN.			
529	1	$9\frac{3}{4}$	27	$7\frac{1}{2}$	
559	2	$11\frac{1}{2}$	32	6	
561	1	$3\frac{1}{4}$	19	7	
568	9	$7\frac{1}{2}$	144	4	Segment.
571	0	$8\frac{1}{8}$	10	6	
579	12	0	180	8	Segment.
581	3	$0\frac{1}{4}$	45	5	
592	15	$3\frac{1}{2}$	230	6	Segment.
689		$9\frac{3}{4}$	12	$6\frac{1}{2}$	
690		$6\frac{5}{8}$	8	$6\frac{1}{2}$	
691	1	$1\frac{5}{8}$	17	6	
692	0	$8\frac{1}{4}$	10	8	
710	2	$7\frac{3}{4}$	40	6	Mortise.
727	26	$5\frac{1}{2}$	395	5	Segment.
806	5	$1\frac{1}{8}$	76	6	
807	2	$1\frac{1}{2}$	31	$4\frac{1}{2}$	
808		9	11	$10\frac{3}{8}$	

## SPUR WHEELS.

 $2\frac{1}{4}$  INCH PITCH.

No.	Diameter.		Cogs.	Face.	Remarks.
	FT.	IN.		INCHES	
54	3	$0\frac{1}{2}$	51	$3\frac{1}{4}$	
55	2	$0\frac{3}{8}$	34	$3\frac{1}{4}$	
56	6	$1\frac{3}{4}$	102	$3\frac{1}{4}$	
85	0	11	15	$3\frac{1}{2}$	
137	11	0	184	3	Segment.
133	2	0	33	3	
139	1	$2\frac{1}{2}$	20	3	
155	2	$1\frac{1}{4}$	35	4	
181	2	$1\frac{1}{4}$	35	2	
223	1	$6\frac{3}{4}$	26	5	
236	0	$7\frac{1}{4}$	10	4	
273	0	10	14	5	
298	1	$10\frac{1}{4}$	31	$5\frac{1}{2}$	
321	10	10	180	4	Segment.
326	12	$11\frac{1}{2}$	216	$4\frac{1}{2}$	Segment.
354	1	1	18	$3\frac{1}{4}$	
377	2	$2\frac{1}{2}$	37	$4\frac{1}{2}$	
443	1	$3\frac{1}{4}$	21	7	
450	3	$2\frac{1}{2}$	54	4	
462	0	$10\frac{1}{8}$	14	6	
473	6	0	100	5	Segment.
478	1	$11\frac{3}{4}$	33	8	
481	8	$7\frac{3}{8}$	144	7	Mortise.
491	11	$6\frac{1}{4}$	192	5	Segment.
492	18	6	310	4	Segment.
494	5	$3\frac{3}{4}$	88	5	Mortise.
497	1	6	25	6	
546	1	$10\frac{1}{4}$	31	$7\frac{1}{2}$	
557	1	9	29	7	
572	24	$4\frac{1}{4}$	406	$4\frac{1}{2}$	Segment.
375	1	$11\frac{7}{8}$	33	5	

## SPUR WHEELS.

 $2\frac{1}{4}$  INCH PITCH.

No.	Diameter.		Cogs.	Face.	Remarks.
	FT.	IN.			
574	20	6	344	4	Segment.
582	5	$3\frac{3}{4}$	88	5	
809	4	$0\frac{1}{2}$	67	5	
810		$7\frac{5}{16}$	10	$5\frac{1}{4}$	
811	2	0	33	5	Mortise. 8 Segments.
812	11	$1\frac{1}{2}$	184	$4\frac{1}{2}$	
813	1	$8\frac{3}{4}$	29	$6\frac{1}{4}$	

 $2\frac{1}{8}$  INCH PITCH.

628		$10\frac{3}{4}$	16	$4\frac{3}{4}$	
629		$8\frac{1}{4}$	12	$5\frac{1}{2}$	
814		$9\frac{1}{2}$	14	3	
815	1	$6\frac{3}{4}$	28	3	

## SPUR WHEELS.

2 INCH PITCH.

No.	Diameter.		Cogs.	Face.	Remarks.
	FT.	IN.		INCHES	
15	4	$0\frac{1}{2}$	76	$2\frac{1}{2}$	
16	3	0	56	$2\frac{1}{2}$	
17	0	$10\frac{1}{4}$	16	$2\frac{1}{2}$	
18	0	$11\frac{1}{2}$	18	$2\frac{1}{2}$	
19	1	$3\frac{5}{8}$	24	$2\frac{1}{2}$	
126	1	$5\frac{1}{2}$	28	3	Mortise.
135	2	$0\frac{3}{4}$	38	$2\frac{1}{2}$	
158	1	9	33	$1\frac{1}{2}$	
212	1	$9\frac{1}{4}$	33	$6\frac{1}{2}$	
226	0	$8\frac{3}{8}$	13	$2\frac{1}{2}$	
258	12	2	228	$3\frac{1}{2}$	Segment.
259	1	$3\frac{1}{4}$	24	$3\frac{1}{2}$	
262	15	$4\frac{1}{2}$	288	$2\frac{1}{2}$	Segment.
263	2	7	48	3	
348	0	$11\frac{1}{2}$	18	$2\frac{1}{4}$	Mortise.
349	15	6	288	5	Segment.
350	1	$2\frac{1}{4}$	22	5	
361	1	$2\frac{1}{4}$	22	4	
362	0	$6\frac{5}{8}$	10	$2\frac{1}{2}$	
367	1	6	28	1	
368	4	3	81	4	
369	1	11	36	4	
371	5	$6\frac{1}{4}$	104	5	
372	2	$0\frac{1}{4}$	38	4	
387	8	1	152	$3\frac{1}{2}$	Segment.
388	1	0	19	$3\frac{1}{2}$	
408	2	$4\frac{1}{4}$	44	5	
466	0	$6\frac{5}{8}$	10	4	
527	1	$7\frac{3}{4}$	31	6	
531	20	$3\frac{1}{2}$	376	3	Segment.

## SPUR WHEELS.

2 INCH PITCH.

No.	Diameter.		Cogs.	Face.	Remarks.
	FT.	IN.			
567	0	$9\frac{3}{4}$	15	4	
682		$10\frac{3}{4}$	16	5	
683		8	12	$5\frac{3}{4}$	
684	2	0	37	3	
685	1	$9\frac{1}{4}$	33	$4\frac{1}{2}$	
686		$8\frac{3}{8}$	13	$6\frac{1}{2}$	
687		$7\frac{3}{4}$	12	7	
688		7	11	$3\frac{1}{4}$	
728	1	$\frac{13}{16}$	20	$4\frac{1}{2}$	
729		$10\frac{7}{8}$	17	4	
816		$6\frac{1}{4}$	10	$2\frac{3}{4}$	
817		$7\frac{1}{8}$	11	$5\frac{1}{8}$	
818		9	14	$6\frac{1}{2}$	
819	1	$3\frac{7}{16}$	24	5	
820		$9\frac{1}{8}$	14	3	
821	5	3	98	$3\frac{1}{2}$	
822	5	$11\frac{1}{2}$	111	3	
823	2	$8\frac{1}{4}$	50	4	

 $1\frac{13}{16}$  INCHES PITCH.

824	1	$2\frac{1}{16}$	24	5	
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## SPUR WHEELS.

 $1\frac{3}{4}$  INCH PITCH.

No.	Diameter.		Cogs.	Face.	Remarks.
	FT.	IN.		INCHES	
167	1	$8\frac{1}{4}$	36	3	
173	2	$10\frac{1}{4}$	61	$2\frac{1}{2}$	
174	1	$11\frac{1}{2}$	41	$2\frac{1}{2}$	
184	0	8	14	$2\frac{1}{2}$	
210	0	$4\frac{1}{2}$	8	$2\frac{1}{2}$	
224	1	$9\frac{3}{4}$	39	3	
283	12	$7\frac{1}{4}$	270	$2\frac{1}{2}$	Segment.
284	1	2	25	$2\frac{1}{2}$	
285	10	1	216	$2\frac{1}{2}$	Segment.
294	16	$1\frac{1}{2}$	352	3	Segment.
342	0	$11\frac{3}{4}$	21	4	
415	0	$6\frac{3}{4}$	12	2	
423	1	6	32	$4\frac{1}{4}$	
458	7	$11\frac{1}{4}$	170	3	Segment.
459	0	$9\frac{1}{2}$	17	3	
825	26	$2\frac{1}{2}$	560	5	Segment.
826		$9\frac{1}{16}$	16	5	
827		$8\frac{7}{16}$	15	$5\frac{1}{4}$	
828		$9\frac{1}{2}$	17	$3\frac{1}{2}$	
829	2	$11\frac{7}{8}$	64	$3\frac{1}{2}$	

## SPUR WHEELS.

 $1\frac{5}{8}$  INCH PINCH.

No.	Diameter		Cogs.	Face.	Remarks.
	FT.	IN.		INCHES	
31	2	$6\frac{1}{4}$	58	$2\frac{1}{4}$	
32	1	0	23	$2\frac{1}{2}$	
681	2	$0\frac{1}{8}$	46	$4\frac{1}{4}$	
708	1	$6\frac{7}{8}$	36	5	Mortise pair.
709	0	$9\frac{7}{16}$	18	5	
830	2	$4\frac{1}{4}$	54	5	Mortise.

 $1\frac{1}{2}$  INCH PITCH.

24	1	0	24	$2\frac{7}{8}$	
75	0	$4\frac{3}{4}$	10	2	
76	0	$4\frac{5}{8}$	10	$1\frac{5}{8}$	
97	2	0	50	2	
110	0	$7\frac{3}{4}$	15	2	
125	1	2	29	3	
141	0	11	23	3	
142	0	$10\frac{1}{2}$	22	3	
162	2	6	62	3	
163	1	6	37	3	
168	1	0	25	2	
169	0	$6\frac{1}{4}$	13	3	
179	1	$5\frac{1}{4}$	36	2	
180	2	0	50	3	
199	5	$5\frac{1}{2}$	136	3	Segment.
200	1	$2\frac{3}{4}$	31	3	
204	0	$3\frac{1}{2}$	7	2	
238	5	$9\frac{1}{2}$	144	$1\frac{3}{4}$	Segment.

## SPUR WHEELS.

 $1\frac{1}{2}$  INCH PITCH.

No.	Diameter.		Cogs.	Face.	Remarks.
	FT.	IN.		INCHES	
239	0	$5\frac{1}{4}$	11	$1\frac{3}{4}$	
242	2	$5\frac{1}{2}$	61	4	
272	2	$11\frac{3}{4}$	74	4	
278	3	$3\frac{1}{8}$	81	4	
313	3	6	88	$3\frac{1}{2}$	
316	0	$6\frac{3}{4}$	14	$3\frac{3}{4}$	
355	2	$9\frac{1}{2}$	70	$3\frac{1}{2}$	
376	6	$2\frac{1}{2}$	156	3	Segment.
424	1	$3\frac{3}{8}$	32	4	
435	1	$9\frac{5}{8}$	45	4	
439	0	$11\frac{5}{8}$	24	4	
442	4	6	112	$3\frac{1}{2}$	
444	0	$6\frac{3}{4}$	14	$3\frac{1}{4}$	
447	3	$4\frac{3}{8}$	84	3	
471	0	$7\frac{1}{4}$	15	3	
489	0	$4\frac{3}{4}$	10	3	
502	0	$6\frac{3}{4}$	14	$2\frac{3}{4}$	
507	0	$7\frac{1}{4}$	15	4	
524	6	$6\frac{3}{4}$	164	3	Segment.
530	0	$8\frac{1}{4}$	17	3	
535	2	$1\frac{1}{2}$	53	3	
536	1	$9\frac{5}{8}$	45	3	
537	1	$5\frac{3}{4}$	37	3	
547	1	$11\frac{1}{2}$	49	3	
548	1	$7\frac{3}{4}$	41	3	
550	2	$4\frac{3}{4}$	60	5	
558	2	$6\frac{1}{2}$	64	3	
585	2	$3\frac{1}{2}$	57	3	
586	1	$10\frac{1}{2}$	47	3	
587	1	$8\frac{5}{8}$	43	3	
588	2	$2\frac{1}{2}$	55	4	

## SPUR WHEELS.

 $1\frac{1}{2}$  INCH PITCH.

No.	Diameter.		Cogs.	Face.	Remarks.
	FT.	IN.			
589	2	$0\frac{3}{8}$	51	3	
590	1	$6\frac{3}{4}$	39	3	
593	2	$7\frac{5}{8}$	66	4	
595	2	$2\frac{7}{8}$	56	3	
596	1	$4\frac{1}{4}$	34	3	
597	1	$2\frac{3}{8}$	30	3	
600	0	$5\frac{3}{4}$	12	$3\frac{1}{2}$	
664	1	0	25	3	
665		$8\frac{1}{8}$	17	5	
666	1	6	38	3	
667	1	7	40	4	
668		$9\frac{1}{8}$	19	3	
669		$8\frac{1}{4}$	17	3	
670	2	7	64	4	
671	1	$4\frac{1}{4}$	34	4	
672	7	$7\frac{7}{8}$	176	3	
673		$4\frac{3}{8}$	9	$3\frac{1}{2}$	
674		$3\frac{7}{8}$	8	$1\frac{3}{4}$	
675		$6\frac{3}{4}$	14	4	
676		$6\frac{3}{4}$	14	$4\frac{1}{2}$	
677		$5\frac{7}{8}$	13	$3\frac{3}{8}$	
678		$6\frac{1}{8}$	13	$2\frac{1}{2}$	
679	4	2	105	$3\frac{7}{8}$	
680	5	3	131	$4\frac{3}{8}$	
750	1	$3\frac{3}{8}$	26	3	
759		$4\frac{3}{8}$	9	$4\frac{1}{2}$	
760		$12\frac{1}{8}$	25	4	
761		$9\frac{3}{4}$	20	4	
762		$8\frac{3}{16}$	17	4	
763		$6\frac{5}{16}$	13	4	

## SPUR WHEELS.

 $1\frac{1}{2}$  INCH PITCH.

No.	Diameter.		Cogs.	Face.	Remarks.
	FT.	IN.		INCHES	
764	3	$\frac{5}{8}$	76	4	
765	1	$6\frac{3}{8}$	38	$3\frac{1}{4}$	
766		$7\frac{3}{4}$	16	$3\frac{1}{2}$	
767		$5\frac{3}{8}$	11	4	
831	1	$4\frac{5}{8}$	35	$4\frac{1}{8}$	
832		4	8	$4\frac{1}{2}$	
833		$41\frac{5}{16}$	10	4	
834	1	$3\frac{1}{2}$	32	4	
835	8	$3\frac{3}{4}$	208	4	
836		10	21	4	
837	12	5	309	$2\frac{1}{2}$	16 Segments.
838	5	$6\frac{3}{8}$	138	$4\frac{1}{8}$	
839	2	$7\frac{3}{8}$	65	$4\frac{1}{4}$	Mortise.

## SPUR WHEELS.

 $1\frac{3}{8}$  INCH PITCH.

No.	Diameter.		Cogs.	Face.	Remarks.
	FT.	IN.			
42	1	$2\frac{3}{4}$	33	$2\frac{1}{4}$	
106	2	$5\frac{3}{4}$	67	2	
107	1	8	45	2	
160	1	$0\frac{1}{2}$	28	2	
161	0	$11\frac{1}{2}$	26	2	
209	0	$3\frac{3}{4}$	8	2	
232	0	$5\frac{1}{2}$	12	$3\frac{1}{4}$	
251	3	$2\frac{3}{4}$	88	3	
252	1	$3\frac{7}{8}$	36	3	
255	1	$2\frac{3}{4}$	33	$3\frac{1}{8}$	
312	0	$6\frac{3}{4}$	15	$2\frac{1}{2}$	
484	1	$6\frac{5}{8}$	42	3	
501	1	$5\frac{3}{4}$	40	$3\frac{1}{2}$	
658		$3\frac{7}{8}$	9	$2\frac{3}{8}$	
659	1	2	32	3	
660		$4\frac{1}{4}$	10	3	
661		$6\frac{1}{4}$	14	$3\frac{1}{2}$	
662		4	9	$2\frac{3}{8}$	
663	1	$9\frac{1}{4}$	48	3	
751		$5\frac{5}{8}$	13	$3\frac{3}{8}$	
768		$5\frac{3}{8}$	12	4	

## SPUR WHEELS.

 $1\frac{1}{4}$  INCH PITCH.

No.	Diameter.		Cogs.	Face.	Remarks.
	FT.	IN.		INCHES	
33	1	10	57	2	
34	1	$2\frac{3}{4}$	37	2	
68	1	$3\frac{1}{4}$	38	2	
74	0	5	12	$1\frac{3}{4}$	
80	0	$4\frac{1}{2}$	11	$1\frac{1}{2}$	
82	0	$9\frac{1}{2}$	24	$1\frac{1}{2}$	
149	0	$10\frac{3}{4}$	27	$1\frac{1}{2}$	
170	0	$3\frac{1}{2}$	9	$2\frac{1}{4}$	
188	2	$0\frac{1}{2}$	61	$2\frac{1}{4}$	
189	1	$4\frac{1}{2}$	41	$2\frac{1}{4}$	
195	0	8	20	$2\frac{1}{2}$	
214	0	$3\frac{1}{8}$	8	2	
225	0	$10\frac{3}{4}$	27	$2\frac{1}{2}$	
235	1	2	35	$2\frac{1}{2}$	
246	3	0	90	4	
247	1	0	30	4	
306	2	6	75	$3\frac{1}{2}$	
308	0	7	17	$3\frac{1}{2}$	
348	2	0	60	4	
358	0	$6\frac{1}{4}$	16	2	
402	1	$6\frac{1}{8}$	45	3	
403	1	$1\frac{1}{4}$	33	2	
404	0	$11\frac{1}{4}$	28	2	
405	0	$9\frac{1}{4}$	23	2	
406	0	$4\frac{1}{8}$	10	$3\frac{1}{2}$	
419	3	8	111	4	
429	0	6	15	$3\frac{3}{4}$	
445	0	$4\frac{7}{8}$	12	3	
463	1	$0\frac{1}{8}$	30	3	
504	0	$6\frac{7}{8}$	17	3	

## SPUR WHEELS.

 $1\frac{1}{4}$  INCH PITCH.

No.	Diameter.		Cogs.	Face.	Remarks.
	FT.	IN.			
522	0	$5\frac{3}{4}$	14	$2\frac{1}{4}$	Segment.
534	5	0	150	$2\frac{1}{2}$	
553	1	$8\frac{3}{4}$	51	2	
653	1	$1\frac{5}{8}$	34	$3\frac{1}{4}$	
654		$4\frac{7}{8}$	12	$2\frac{7}{8}$	
655		$5\frac{5}{8}$	13	$2\frac{7}{8}$	
656		$8\frac{3}{4}$	22	2	
657	1	$9\frac{1}{2}$	52	$2\frac{5}{8}$	
769	2	$7\frac{5}{16}$	78	$2\frac{3}{4}$	
840		$6\frac{1}{16}$	15	3	
841		$4\frac{1}{2}$	11	3	

 $1\frac{3}{16}$  INCH PITCH.

412	2	0	65	$2\frac{5}{8}$
413	0	$4\frac{3}{4}$	13	$3\frac{7}{8}$
770		$6\frac{5}{8}$	17	$5\frac{1}{8}$
771		$3\frac{1}{2}$	9	$3\frac{1}{4}$

## SPUR WHEELS.

 $1\frac{1}{8}$  INCH PITCH.

No.	Diameter.		Cogs.	Face.	Remarks.
	FT.	IN.		INCHES	
73	0	5	14	$1\frac{1}{2}$	
121	0	$8\frac{1}{4}$	24	$1\frac{3}{8}$	
335	1	$11\frac{1}{2}$	37	3	
336	0	$5\frac{1}{2}$	15	3	
339	1	0	33	3	
340	0	$6\frac{1}{2}$	18	3	
346	0	$11\frac{1}{2}$	32	$2\frac{1}{2}$	
392	1	$5\frac{1}{4}$	47	3	
393	1	$3\frac{3}{4}$	43	3	
394	1	$0\frac{3}{4}$	35	3	
398	0	$11\frac{1}{4}$	31	3	
479	1	$6\frac{1}{4}$	51	$2\frac{1}{2}$	
575	1	6	49	3	
576	0	$10\frac{5}{8}$	29	3	
626	3	$5\frac{1}{4}$	114	3	
627		$4\frac{1}{16}$	11	$2\frac{3}{8}$	
715		$6\frac{7}{16}$	18	$3\frac{1}{4}$	
717	2	$9\frac{7}{8}$	93	3	
718	2	$6\frac{3}{8}$	84	$2\frac{1}{2}$	
730		$7\frac{7}{16}$	21	$3\frac{1}{8}$	
731		5	14	$2\frac{1}{2}$	
752		$4\frac{7}{8}$	14	$2\frac{1}{4}$	
772	1	$7\frac{7}{8}$	55	$2\frac{1}{4}$	
773	1	$8\frac{1}{4}$	56	$2\frac{1}{4}$	
774	1	$\frac{1}{4}$	34	3	
842		$3\frac{1}{4}$	10	$2\frac{5}{8}$	
843		$8\frac{1}{16}$	24	$2\frac{3}{8}$	
844		$4\frac{3}{4}$	13	$3\frac{3}{8}$	
845	1	$7\frac{5}{16}$	48	$2\frac{1}{8}$	
846		$8\frac{5}{16}$	23	3	

## SPUR WHEELS.

1 INCH PITCH.

No.	Diameter.		Cogs.	Face.	Remarks.
	FT.	IN.			
20	2	10	106	$1\frac{7}{8}$	
21	0	$9\frac{1}{2}$	30	2	
156	2	4	87	2	
208	0	4	12	2	
253	2	0	75	2	
254	0	8	25	2	
274	0	6	19	$2\frac{1}{2}$	
295	0	$3\frac{1}{4}$	10	2	
301	0	$5\frac{1}{8}$	16	2	
302	0	$6\frac{3}{8}$	20	$3\frac{1}{4}$	
307	2	6	95	3	
341	0	10	32	3	
344	0	$10\frac{1}{8}$	32	3	
363	1	4	50	2	
390	2	10	106	2	
401	0	$11\frac{5}{8}$	36	2	
411	1	$9\frac{1}{4}$	66	$2\frac{1}{2}$	
414	0	$3\frac{1}{4}$	10	$2\frac{1}{2}$	
417	2	$11\frac{3}{8}$	110	2	
418	0	3	9	$2\frac{1}{4}$	
421	1	7	60	$2\frac{1}{4}$	
422	1	3	47	2	
427	3	0	112	2	
428	0	$5\frac{3}{4}$	18	$2\frac{1}{4}$	
457	2	$9\frac{3}{8}$	105	2	
461	0	$5\frac{3}{4}$	18	$2\frac{1}{4}$	
487	3	11	147	$2\frac{1}{2}$	
488	2	$6\frac{3}{8}$	95	$2\frac{1}{4}$	
500	1	$11\frac{1}{2}$	42	2	
532	5	$7\frac{1}{4}$	208	$1\frac{3}{4}$	Segment.
533	0	$5\frac{7}{8}$	18	5	

## SPUR WHEELS.

1 INCH PITCH.

No.	Diameter.		Cogs.	Face.	Remarks.
	FT.	IN.		INCHES	
551	2	5 $\frac{3}{8}$	92	2 $\frac{1}{2}$	
552	1	10 $\frac{1}{4}$	70	2 $\frac{1}{2}$	
556	2	2 $\frac{1}{4}$	82	2	
564	0	4 $\frac{1}{2}$	14	2	
565	0	9	28	2	
566	1	2 $\frac{3}{4}$	46	2	
570	3	2 $\frac{1}{4}$	120	2	
633		4 $\frac{5}{8}$	14	4 $\frac{1}{2}$	
634	1	8 $\frac{3}{8}$	63	2	
635		11 $\frac{5}{8}$	36	2	
636		8 $\frac{3}{8}$	26	2	
637.		6 $\frac{3}{4}$	21	2 $\frac{1}{8}$	
638	2	$\frac{1}{4}$	76	2 $\frac{1}{2}$	
639		4 $\frac{3}{4}$	14	4	
640		3 $\frac{7}{8}$	12	3 $\frac{1}{4}$	
641		5 $\frac{1}{8}$	16	1 $\frac{1}{2}$	
642		3 $\frac{7}{8}$	12	2 $\frac{3}{4}$	
643		4 $\frac{1}{2}$	14	2 $\frac{1}{4}$	
644		3 $\frac{7}{8}$	12	2 $\frac{1}{2}$	
645		3 $\frac{1}{4}$	10	1 $\frac{1}{2}$	
646		7 $\frac{3}{4}$	24	1 $\frac{1}{2}$	
647		10	31	1 $\frac{1}{2}$	Mortise.
648		10	31	1 $\frac{1}{2}$	
649		11 $\frac{1}{2}$	36	1 $\frac{1}{2}$	
650		3 $\frac{5}{8}$	11	2 $\frac{5}{8}$	
651	1	3	47	1 $\frac{1}{2}$	
652	1	5 $\frac{3}{4}$	54	2 $\frac{7}{8}$	
719		3 $\frac{7}{8}$	12	3 $\frac{1}{4}$	
732		3 $\frac{3}{16}$	10	2 $\frac{1}{4}$	
733		2 $\frac{5}{8}$	7	2 $\frac{3}{8}$	
734	1	4 $\frac{1}{8}$	50	2 $\frac{5}{8}$	

## SPUR WHEELS.

1 INCH PITCH.

No.	Diameter.		Cogs.	Face.	Remarks.
	FT.	IN.			
735		$5\frac{1}{2}$	17	3	
753		$4\frac{7}{8}$	15	$2\frac{1}{4}$	
775		$6\frac{3}{8}$	20	2	
776		$7\frac{1}{2}$	23	2	
847	1	$3\frac{7}{8}$	50	$2\frac{5}{8}$	
848		$4\frac{1}{4}$	13	3	
849	1	$6\frac{1}{16}$	56	2	

 $\frac{1\ 5}{16}$  INCH PITCH.

850	$2\frac{7}{8}$	10	3	Long cogs.
851	$6\frac{1}{16}$	20	$1\frac{1}{2}$	

## SPUR WHEELS.

 $\frac{7}{8}$  INCH PITCH.

No.	Diameter.		Cogs.	Face.	Remarks.
	FT.	IN.			
620		4	14	$1\frac{7}{8}$	
621		$4\frac{1}{8}$	15	$3\frac{1}{4}$	
622		$3\frac{3}{8}$	12	$2\frac{1}{2}$	
623		$3\frac{1\frac{5}{6}}{16}$	14	2	
624		$11\frac{7}{8}$	42	$1\frac{1}{2}$	
625		$3\frac{7}{8}$	14	$1\frac{7}{8}$	
630		5	18	$1\frac{1}{2}$	
631		$3\frac{1}{4}$	12	$1\frac{3}{4}$	
632		$3\frac{3}{8}$	12	$2\frac{1}{2}$	
736		$5\frac{5}{8}$	20	2	
777		$5\frac{3}{8}$	20	$2\frac{1}{2}$	
852	1	$2\frac{1}{8}$	50	$1\frac{5}{8}$	
853		$5\frac{7}{16}$	20	$2\frac{1}{4}$	
854		$5\frac{1}{4}$	19	$1\frac{5}{8}$	

 $\frac{13}{16}$  INCH PITCH.

737	1	2	52	$1\frac{3}{4}$	
855	1	$0\frac{1}{8}$	48	$3\frac{1}{2}$	

## SPUR WHEELS.

 $\frac{3}{4}$  INCH PITCH.

No.	Diameter.		Cogs.	Face.	Remarks.
	FT.	IN.			
131		$10\frac{3}{4}$	44	$1\frac{3}{4}$	
157		$5\frac{1}{2}$	22	$1\frac{3}{4}$	
440	2	2	108	$1\frac{1}{8}$	
485		$4\frac{1}{4}$	18	$2\frac{1}{8}$	
486		$3\frac{1}{2}$	14	$1\frac{3}{4}$	
616		$2\frac{5}{8}$	11	2	
617		$4\frac{1}{4}$	18	$2\frac{3}{8}$	
618		3	13	$1\frac{1}{2}$	
619		$2\frac{5}{8}$	11	2	
739		$3\frac{1}{8}$	13	$1\frac{3}{4}$	
740		$2\frac{3}{4}$	60	$1\frac{3}{4}$	
754		$2\frac{1}{16}$	12	2	
778	1	$3\frac{1}{8}$	13	$2\frac{5}{8}$	
779	1	$10\frac{1}{2}$	93	$2\frac{1}{2}$	
789	1	$8\frac{1}{4}$	84	$2\frac{1}{4}$	
790		$3\frac{7}{16}$	14	2	
856	2	2	108	$1\frac{1}{2}$	
857		$9\frac{5}{8}$	40	$2\frac{1}{2}$	
858		$4\frac{1}{16}$	20	$2\frac{1}{2}$	
859		2	8	$2\frac{1}{4}$	
860		$3\frac{1}{16}$	15	$1\frac{3}{4}$	
861	1	$4\frac{1}{8}$	67	$1\frac{3}{4}$	
862		$6\frac{3}{4}$	28	$1\frac{3}{4}$	
863		$2\frac{5}{8}$	11	2	
864		$3\frac{3}{2}$	13	$1\frac{3}{4}$	

## SPUR WHEELS.

 $\frac{11}{16}$  INCH PITCH.

No.	Diameter		Cogs.	Face.	Remarks.
	FT.	IN.		INCHES	
738		$3\frac{5}{8}$	16	$2\frac{1}{8}$	
755		6	27	$1\frac{1}{4}$	
783	1	$11\frac{3}{16}$	60	$1\frac{3}{4}$	
784		$10\frac{7}{8}$	47	$1\frac{3}{4}$	
865		$10\frac{5}{16}$	48	$1\frac{1}{2}$	
866		6	26	$1\frac{3}{4}$	

 $\frac{5}{8}$  INCH PITCH.

615		$3\frac{1}{2}$	16	$2\frac{3}{8}$	
716	1	$3\frac{1}{4}$	75	$1\frac{1}{2}$	
741		$51\frac{5}{16}$	30	$1\frac{3}{4}$	
742		$71\frac{5}{16}$	40	$1\frac{3}{4}$	
743		$5\frac{1}{4}$	26	$1\frac{1}{4}$	
744		$3\frac{3}{8}$	17	$1\frac{3}{4}$	
780		$9\frac{3}{16}$	47	$1\frac{3}{4}$	
791		$3\frac{5}{8}$	19	$1\frac{3}{8}$	
867		$7\frac{1}{2}$	37	$1\frac{1}{2}$	
868		$11\frac{1}{4}$	56	$1\frac{1}{2}$	
869		$6\frac{1}{4}$	32	$1\frac{1}{8}$	
870		$3\frac{1}{8}$	15	$1\frac{1}{2}$	

## SPUR WHEELS.

 $\frac{9}{16}$  INCH PITCH.

No.	Diameter.		Cogs.	Face.	Remarks.
	FT.	IN.		INCHES	
745		$5\frac{1}{2}$	28	$1\frac{1}{4}$	
781		$2\frac{7}{16}$	14	$1\frac{1}{4}$	
792		$6\frac{1}{4}$	36	$1\frac{1}{4}$	
793		$6\frac{3}{4}$	39	$1\frac{1}{4}$	
871		$3\frac{1}{4}$	18	$1\frac{3}{8}$	
872		$3\frac{5}{8}$	19	$1\frac{3}{8}$	

 $\frac{1}{2}$  INCH PITCH.

604		$7\frac{9}{16}$	47	$1\frac{1}{8}$	
605		$2\frac{7}{8}$	17	$1\frac{5}{8}$	
606	1	3	95	$1\frac{1}{4}$	
607		$7\frac{5}{8}$	48	$1\frac{1}{4}$	
608	1	$\frac{1}{4}$	76	$1\frac{1}{4}$	
609	1	$6\frac{1}{2}$	114	$1\frac{1}{2}$	
610		8	50	$1\frac{1}{4}$	
611		$6\frac{1}{8}$	38	$1\frac{1}{4}$	
612		$11\frac{1}{4}$	70	$1\frac{1}{8}$	
613		$2\frac{1}{4}$	17	$1\frac{5}{8}$	
614		$5\frac{3}{4}$	36	$1\frac{1}{4}$	
707	1	$3\frac{3}{8}$	96	$1\frac{1}{2}$	
711		$4\frac{1}{16}$	31	$\frac{7}{8}$	
712		$7\frac{1}{16}$	50	$\frac{7}{8}$	
713		3	19	$\frac{7}{8}$	
714		4	25	$\frac{7}{8}$	
720		8	47	$1\frac{1}{8}$	
746		$4\frac{7}{16}$	28	$\frac{7}{8}$	
756		$4\frac{1}{16}$	30	1	
757		$2\frac{3}{8}$	15	$1\frac{1}{4}$	
782		$2\frac{1}{4}$	14	$\frac{5}{8}$	

## SPUR WHEELS.

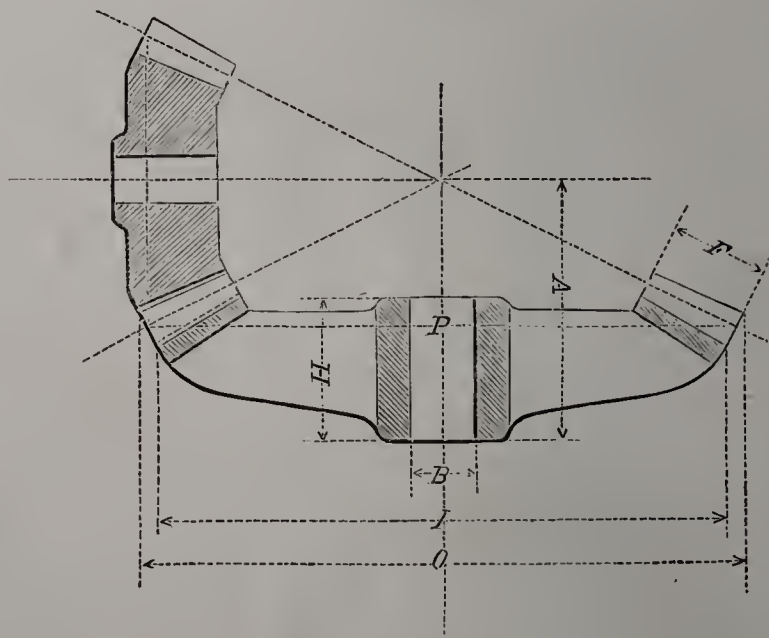
 $\frac{1}{2}$  INCH PITCH.

No.	Diameter.		Cogs.	Face.	Remarks.
	FT.	IN.			
873		$2\frac{5}{8}$	16	$1\frac{3}{16}$	
874		$3\frac{7}{8}$	25	$1\frac{1}{2}$	
875		$2\frac{5}{16}$	15	$1\frac{1}{16}$	
882	1	$3\frac{3}{8}$	95	$1\frac{3}{4}$	
883		$5\frac{3}{4}$	36	$1\frac{3}{4}$	

 $\frac{3}{8}$  INCH PITCH.

602	$6\frac{1}{4}$	52	$1\frac{1}{4}$	
603	$7\frac{5}{8}$	64	$1\frac{1}{4}$	
785	$1\frac{1}{2}$	12	$1\frac{1}{4}$	
792	$6\frac{1}{4}$	36	$1\frac{1}{4}$	
793	$6\frac{3}{4}$	39	$1\frac{1}{4}$	
871	$3\frac{1}{4}$	18	$1\frac{3}{8}$	
872	$3\frac{5}{8}$	19	$1\frac{3}{8}$	

## BEVEL WHEELS.



- A.—Distance from back of hub to center of shaft.  
 B.—Bore of wheel.  
 F.—Face of wheel.  
 H.—Length of hub.  
 I.—Inside diameter or diameter at base of cogs.  
 O.—Outside diameter of cogs.  
 P.—Pitch line diameter.

When ordering Bevel Wheels, send all the dimensions represented by letters in the above sketch, and give also the following information :

The List number of wheel, if made from our pattern, and also the Pitch and the number of cogs in wheel required, and in that which engages with it.

The width of keyseat and its depth at face and back of wheel.

**BEVEL WHEELS.** $3\frac{1}{2}$  INCH PITCH.

No.	Diameter.		Cogs.	Face.	Remarks.
	FT.	IN.		INCHES	
356	5	$0\frac{3}{4}$	54	12	} Pair.
357	1	$8\frac{1}{2}$	18	12	
370	10	$8\frac{1}{4}$	114	9	} Mortise.
371	1	$11\frac{3}{4}$	21	9	

 $3\frac{1}{4}$  INCH PITCH.

368	7	$7\frac{1}{2}$	88	7	} Segment.
369	1	10	21	7	

3 INCH PITCH.

151	11	6	144	7	} Segment.
152	3	9	47	7	
239	7	1	88	10	} Pair.
240	3	$6\frac{1}{2}$	44	10	
245	5	4	67	9	} Pair.
246	4	8	58	9	

## BEVEL WHEELS.

 $2\frac{3}{4}$  INCH PITCH.

No.	Diameter.		Cogs.	Face.	Remarks.
	FT.	IN.		INCHES	
5	8	$9\frac{1}{4}$	120	$6\frac{1}{2}$	} Segment.
6	3	$1\frac{3}{4}$	43	$6\frac{1}{2}$	
24	4	5	60	$5\frac{1}{2}$	} Mortise.
25	1	$6\frac{1}{2}$	21	$5\frac{1}{2}$	
38	5	$3\frac{1}{4}$	72	$5\frac{1}{2}$	} Mortise.
39	2	$3\frac{1}{4}$	31	$5\frac{1}{2}$	
83	5	$8\frac{1}{2}$	78	$4\frac{3}{4}$	} Pair.
84	1	$8\frac{1}{4}$	23	$4\frac{3}{4}$	
85	10	$7\frac{3}{4}$	144	$7\frac{1}{2}$	} Mortise.
86	2	$11\frac{1}{2}$	40	$7\frac{1}{2}$	
91	8	$9\frac{1}{2}$	120	6	} Pair.
92	2	5	33	6	
123	6	$7\frac{1}{2}$	90	7	} Pair.
124	2	7	35	7	
135	1	4	18	5	} Pair.
136	3	$11\frac{1}{2}$	54	5	
175	8	$9\frac{1}{2}$	120	$5\frac{1}{2}$	} Segment.
176	2	$7\frac{1}{2}$	36	$5\frac{1}{2}$	
185	14	1	190	7	} Segment.
186	2	7	35	7	
189	8	$0\frac{3}{4}$	110	7	} Pair.
190	2	$9\frac{1}{2}$	38	7	
191	7	11	108	6	} Mortise.
192	1	$5\frac{3}{4}$	20	6	
193	9	$4\frac{1}{2}$	128	$7\frac{1}{2}$	} Pair.
194	2	$6\frac{3}{4}$	35	$7\frac{1}{2}$	
195	6	$7\frac{1}{2}$	88	6	} Mortise.
196	1	$3\frac{1}{4}$	18	6	
220	6	$7\frac{1}{2}$	90	7	} Segment.
124	2	7	35	7	

## BEVEL WHEELS.

 $2\frac{3}{4}$  INCH PITCH.

No.	Diameter.		Cogs.	Face.	Remarks.
	FT.	IN.		INCHES	
221	6	11	94	8	} Pair.
222	3	$5\frac{1}{2}$	47	8	
223	7	$2\frac{3}{4}$	98	10	} Mortise.
224	3	$0\frac{3}{8}$	41	10	
233	4	$11\frac{3}{4}$	68	6	} Pair.
234	3	6	48	6	
235	8	$2\frac{1}{4}$	112	9	} Pair.
236	2	$9\frac{1}{4}$	38	9	
251	8	$0\frac{3}{4}$	110	7	} Seg. & arms.
190	2	$9\frac{1}{2}$	38	7	
252	2	7	35	3	} 3works with 251
265	5	6	75	9	
266	3	9	51	9	} Pair.
269	8	$9\frac{3}{4}$	120	$5\frac{1}{2}$	
270	2	$11\frac{1}{2}$	40	$5\frac{1}{2}$	} Seg. & arms.
273	12	3	168	6	
274	2	$6\frac{1}{2}$	35	6	} Pair.
285	8	$9\frac{3}{4}$	120	7	
286	2	$11\frac{1}{2}$	40	7	} Seg. & arms.
293	5	6	75	9	
294	4	$9\frac{1}{4}$	65	9	} Pair.
299	9	1	124	9	
300	3	$3\frac{5}{8}$	45	9	} Pair.
310	4	$8\frac{3}{4}$	64	8	
311	3	9	51	8	} Mortise.
318	5	$9\frac{1}{4}$	78	8	
319	2	7	35	8	} Pair.
344	5	6	75	11	
345	3	9	51	11	} Mortise.
346	9	$4\frac{1}{2}$	128	7	
347	2	$9\frac{1}{2}$	38	7	} Pair.

## BEVEL WHEELS.

 $2\frac{3}{4}$  INCH PITCH.

No.	Diameter.		Cogs.	Face.	Remarks.
	FT.	IN.		INCHES	
358	4	0 $\frac{1}{2}$	55	8	} Pair.
359	1	5 $\frac{3}{4}$	20	8	
2 $\frac{5}{8}$ INCH PITCH.					
32	10	0	144	5	} Segment.
33	2	0 $\frac{3}{8}$	30	5	} Pair.
101	11	2 $\frac{1}{2}$	160	5	} Segment.
102	2	2	31	5	} Pair.
203	9	0	128	5 $\frac{1}{2}$	} Segment.
204	3	7	49	5 $\frac{1}{2}$	} Pair.
2 $\frac{1}{2}$ INCH PITCH.					
1	2	0	30	5 $\frac{1}{4}$	} Pair.
2	6	11	104	5 $\frac{1}{4}$	} Segment.
16	5	0	75	6	} Pair.
17	3	0	45	6	
60	3	6 $\frac{1}{2}$	53	3 $\frac{3}{4}$	} Pair.
61	2	5	36	3 $\frac{3}{4}$	
87	4	0	60	7 $\frac{1}{2}$	} Pair.
88	2	11	44	7 $\frac{1}{2}$	
109	4	0	60	4 $\frac{1}{2}$	} Segment.
110	2	0 $\frac{3}{4}$	31	4 $\frac{1}{2}$	} Pair.
133	6	4 $\frac{1}{2}$	96	4	} Segment.
134	2	11	44	4	} Pair.
157	4	9 $\frac{1}{2}$	72	6	} Pair.
158	2	4	35	6	
159	5	4	80	6	} Mortise.
160	1	4	20	6	} Pair.
167	4	9 $\frac{1}{2}$	72	4	} Mortise.
168	1	8	25	4	} Pair.
187	3	7	54	4 $\frac{1}{2}$	} Mortise.
188	1	10 $\frac{1}{4}$	28	4 $\frac{1}{2}$	} Pair.
209	9	4 $\frac{1}{2}$	140	7	} Pair.
210	2	8 $\frac{1}{4}$	40	7	

## BEVEL WHEELS.

 $2\frac{1}{2}$  INCH PITCH.

No.	Diameter.		Cogs.	Face.	Remarks.
	FT.	IN.		INCHES	
213	3	$7\frac{1}{2}$	54	7	} Pair.
214	2	$2\frac{1}{2}$	33	7	
216	3	$2\frac{1}{2}$	48	6	} Mortise.
217	1	$11\frac{1}{4}$	29	6	
227	9	7	144	6	} Seg. & arms.
228	2	0	30	6	
231	8	0	120	5	} Pair.
232	2	$10\frac{1}{2}$	43	5	
237	5	$2\frac{3}{8}$	78	6	} Mortise.
238	2	0	30	6	
289	11	$2\frac{3}{4}$	168	7	} Seg. & arms.
290	3	0	45	7	
303	4	$0\frac{1}{2}$	60	8	} Pair.
304	4	$1\frac{1}{4}$	61	8	
308	3	0	45	6	} Pair.
309	2	$7\frac{1}{4}$	39	6	
312	4	$8\frac{1}{2}$	70	9	} Pair.
313	4	$1\frac{1}{4}$	61	9	
336	6	0	90	8	} Mortise.
337	3	0	45	8	
348	3	$4\frac{1}{4}$	50	8	} Pair.
349	2	$3\frac{1}{4}$	34	8	
352	3	$0\frac{1}{4}$	45	7	} Pair.
353	1	$0\frac{1}{8}$	15	7	
354	4	$9\frac{3}{4}$	72	8	} Mortise.
355	2	$11\frac{1}{4}$	44	8	
360	4	5	66	7	} Pair.
361	1	$6\frac{1}{2}$	23	7	
388	1	9	26	7	} Pair.
389	5	$0\frac{3}{8}$	75	7	

## BEVEL WHEELS.

 $2\frac{3}{8}$  INCH PITCH.

No.	Diameter.		Cogs.	Face.	Remarks.
	FT.	IN.		INCHES	
278	5	0	79	5	} Pair.
279	2	$3\frac{1}{2}$	36	5	

 $2\frac{1}{4}$  INCH PITCH.

11	2	10	47	$3\frac{1}{2}$	} Mortise.
12	2	$2\frac{1}{2}$	37	$3\frac{1}{2}$	
79	4	0	66	6	} Pair.
80	2	0	33	6	
111	5	$0\frac{1}{2}$	84	4	} Segment.
112	1	6	25	4	
117	2	$8\frac{1}{2}$	45	4	} Pair.
118	2	2	36	4	
155	8	2	136	4	} Segment.
156	1	$6\frac{3}{4}$	26	4	
173	9	$7\frac{1}{4}$	160	5	} Segment.
174	2	$4\frac{3}{4}$	40	5	
199	2	9	46	$3\frac{1}{2}$	} Pair.
200	2	4	39	$3\frac{1}{2}$	
201	6	3	104	$5\frac{1}{2}$	} Segment.
202	1	$9\frac{1}{2}$	30	$5\frac{1}{2}$	
263	7	$2\frac{1}{8}$	120	$5\frac{1}{2}$	} Mortise.
264	1	$6\frac{3}{4}$	26	$5\frac{1}{2}$	
276	4	0	66	8	} Pair.
277	2	0	33	8	
282	4	$0\frac{1}{4}$	67	6	} Pair.
283	2	$4\frac{3}{4}$	40	6	
291	4	$1\frac{3}{4}$	69	5	} Pair.
292	3	$1\frac{1}{2}$	52	5	

## BEVEL WHEELS.

 $2\frac{1}{4}$  INCH PITCH.

No.	Diameter.		Cogs.	Face.	Remarks.
	FT.	IN.		INCHES	
372	11	$1\frac{3}{8}$	184	$6\frac{1}{2}$	} Mortise.
373	2	$1\frac{3}{8}$	35	$6\frac{1}{2}$	
390	1	$6\frac{1}{8}$	25	$4\frac{3}{4}$	} Pair.
391		$10\frac{1}{8}$	14	$4\frac{3}{4}$	
392		$11\frac{5}{8}$	16	5	} Pair.
393	1	$11\frac{1}{4}$	32	5	

2 INCH PITCH.

3	1	$9\frac{3}{4}$	34	$2\frac{3}{4}$	} Pair.
4	2	$5\frac{1}{2}$	46	$2\frac{3}{4}$	
7	2	$1\frac{1}{2}$	40	$2\frac{1}{2}$	} Pair.
8	1	11	36	$2\frac{1}{2}$	
28	4	$3\frac{3}{4}$	80	$4\frac{1}{2}$	} Mortise.
29	1	$8\frac{1}{2}$	32	$4\frac{1}{2}$	
68	1	8	31	3	} Pair.
69	1	4	25	3	
75	3	5	64	4	} Pair.
76	1	$8\frac{1}{2}$	32	4	
113	2	$1\frac{1}{2}$	40	$2\frac{3}{4}$	} Pair.
114	1	$7\frac{1}{4}$	30	$2\frac{3}{4}$	
121	2	$4\frac{3}{4}$	45	$2\frac{1}{4}$	} Pair.
122	1	8	31	$2\frac{1}{4}$	
125	2	$1\frac{1}{2}$	40	4	} Pair.
126	1	4	25	4	
127	4	$2\frac{1}{2}$	79	6	} Pair.
128	1	$10\frac{1}{4}$	35	6	
129	3	$4\frac{1}{2}$	62	4	} Pair.
130	1	$6\frac{3}{4}$	29	4	
131	3	$2\frac{1}{2}$	60	4	} Pair.
132	1	$10\frac{1}{2}$	35	4	

## BEVEL WHEELS.

2 INCH PITCH.

No.	Diameter.		Cogs.	Face.	Remarks.
	FT.	IN.		INCHES	
137	1	11	36	$2\frac{1}{4}$	} Pair.
138	2	$0\frac{1}{4}$	38	$2\frac{1}{4}$	
141	1	11	36	$3\frac{1}{2}$	} Pair.
142	1	9	33	$3\frac{1}{2}$	
145	5	0	94	4	} Pair.
146	1	4	25	4	
177	3	3	61	5	} Pair.
178	2	9	55	5	
207	2	$0\frac{1}{2}$	38	5	} Pair.
208	1	9	33	5	
211	2	10	52	5	} Pair.
212	1	7	29	5	
267	4	$6\frac{3}{8}$	84	7	} Mortise.
268	1	$6\frac{1}{8}$	28	7	
271	2	$1\frac{5}{8}$	40	$6\frac{1}{2}$	} Pair.
272	2	$0\frac{3}{8}$	38	$6\frac{1}{2}$	
280	2	6	47	4	} Pair.
281	1	$7\frac{3}{4}$	31	4	
301	3	$10\frac{1}{2}$	72	5	} Mortise.
302	1	$11\frac{1}{4}$	36	5	
332	2	10	53	6	} Pair.
333	1	$10\frac{1}{2}$	35	6	
340	5	$9\frac{1}{4}$	108	5	} Mortise.
341	1	$8\frac{1}{2}$	32	5	
394		$8\frac{1}{2}$	13	4	} Pair.
395	2	$1\frac{1}{4}$	40	4	
396	1	$6\frac{1}{8}$	25	$4\frac{3}{4}$	} Pair.
397		$10\frac{1}{8}$	10	$4\frac{3}{4}$	
398	3	$2\frac{6}{8}$	60	$4\frac{1}{2}$	} Pair.
399	1	$0\frac{7}{8}$	20	$4\frac{1}{2}$	

## BEVEL WHEELS.

2 INCH PITCH.

No.	Diameter.		Cogs.	Face.	Remarks.
	FT.	IN.		INCHES	
400	2	$0\frac{1}{2}$	38	$4\frac{1}{2}$	} Pair.
401	2	3	42	$4\frac{1}{2}$	
402	1	$2\frac{3}{16}$	22	4	} Pair.
403	2	$8\frac{13}{16}$	51	4	
404	2	$8\frac{13}{16}$	51	4	} Pair.
405		$7\frac{13}{16}$	12	4	

 $1\frac{7}{8}$  INCH PITCH.

48	0	10	17	4	} Pair.
49	3	6	70	4	
261	0	$11\frac{1}{4}$	18	$3\frac{3}{4}$	} Pair.
262	3	11	76	$3\frac{3}{4}$	

## BEVEL WHEELS.

 $1\frac{3}{4}$  INCH PITCH.

No.	Diameter.		Cogs.	Face.	Remarks.
	FT.	IN.		INCHES	
9	1	$7\frac{1}{2}$	5	$2\frac{1}{2}$	} Pair.
10	1	$10\frac{7}{8}$	41	$2\frac{1}{2}$	
26	2	4	50	$4\frac{3}{8}$	} Mortise.
27	1	$5\frac{1}{2}$	31	$4\frac{3}{8}$	
36	2	4	50	$3\frac{1}{2}$	} Pair.
37	1	$4\frac{3}{4}$	30	$3\frac{1}{2}$	
64	3	$7\frac{3}{8}$	77	3	} Pair.
65	1	$3\frac{1}{4}$	27	3	
70	2	4	50	$4\frac{3}{8}$	} Pair.
27	1	$5\frac{1}{2}$	31	$4\frac{3}{8}$	
71	2	$4\frac{1}{2}$	51	5	} Pair.
72	1	$9\frac{3}{4}$	39	5	
77	1	$10\frac{7}{8}$	41	$2\frac{1}{4}$	} Pair.
78	1	$7\frac{1}{2}$	35	$2\frac{1}{4}$	
89	3	0	64	3	} Pair.
90	0	$11\frac{3}{4}$	21	3	
99	3	0	64	$3\frac{1}{2}$	} Pair.
100	1	$11\frac{1}{2}$	42	$3\frac{1}{2}$	
143	4	$6\frac{3}{4}$	97	$3\frac{1}{2}$	} Pair.
144	0	$10\frac{3}{4}$	19	$3\frac{1}{2}$	
153	2	6	54	4	} Pair.
154	1	3	27	4	
161	2	$9\frac{3}{8}$	60	5	} Pair.
162	2	$0\frac{1}{2}$	44	5	
163	2	$2\frac{1}{4}$	48	5	} Pair.
164	1	$10\frac{3}{8}$	40	5	
179	1	$10\frac{3}{8}$	40	3	} Mortise.
180	1	7	34	3	
197	1	$9\frac{1}{4}$	38	$3\frac{1}{2}$	} Pair.
198	1	7	34	$3\frac{1}{2}$	

## BEVEL WHEELS.

 $1\frac{3}{4}$  INCH PITCH.

No.	Diameter.		Cogs.	Face.	Remarks.
	FT.	IN.		INCHES	
229	3	$7\frac{3}{8}$	77	4	} Pair.
230	2	$5\frac{3}{8}$	52	4	
241	4	$1\frac{1}{2}$	88	$5\frac{1}{4}$	} Pair.
242	1	6	32	$5\frac{1}{4}$	
243	3	$11\frac{1}{2}$	84	3	} Segment.
244	1	$8\frac{1}{4}$	36	3	
247	2	4	50	5	} Pair.
248	2	1	45	5	
253	2	$9\frac{3}{8}$	60	4	} Pair.
254	2	$6\frac{1}{8}$	54	4	
255	11	6	259	$4\frac{1}{2}$	} Segment.
256	2	$2\frac{1}{4}$	47	$4\frac{1}{2}$	
275	0	$10\frac{3}{4}$	19	3	} 3 works with 89
320	2	$0\frac{3}{4}$	44	5	
321	1	$5\frac{1}{2}$	31	5	} Pair.
322	6	0	128	$3\frac{1}{2}$	
323	1	2	25	$3\frac{1}{2}$	} Segment.
374	2	$9\frac{7}{16}$	60	6	
375	1	$1\frac{3}{8}$	24	6	} Pair.
386	2	$9\frac{9}{16}$	60	$4\frac{1}{2}$	
387		$9\frac{5}{8}$	17	$4\frac{1}{2}$	} Pair.
406	3	0	64	4	
407	1	$0\frac{3}{8}$	22	4	} Pair.
408	11	$8\frac{3}{4}$	250	$4\frac{1}{2}$	
409		$9\frac{5}{8}$	17	$4\frac{1}{2}$	} 10 Segments.

## BEVEL WHEELS.

 $1\frac{5}{8}$  INCH PITCH.

No.	Diameter.		Cogs.	Face.	Remarks.
	FT.	IN.		INCHES	
18	1	$9\frac{1}{4}$	41	$2\frac{1}{2}$	} Pair.
19	1	$9\frac{3}{4}$	42	$2\frac{1}{2}$	
20	2	6	58	3	} Pair.
21	1	0	23	3	
62	2	4	54	$2\frac{1}{4}$	} Pair.
63	1	$5\frac{1}{4}$	33	$2\frac{1}{4}$	
93	2	9	63	3	} Pair.
94	2	1	48	3	
119	2	$5\frac{1}{2}$	56	$2\frac{3}{4}$	} Pair.
120	0	$7\frac{1}{2}$	14	$2\frac{3}{4}$	
297	1	$9\frac{1}{2}$	41	$2\frac{1}{2}$	} Pair.
298	1	$6\frac{3}{8}$	35	$2\frac{1}{2}$	
316	2	$2\frac{1}{4}$	50	3	} Pair.
317	1	$4\frac{1}{4}$	31	3	
410	2	$5\frac{1}{2}$	56	$2\frac{3}{4}$	Mortise. works in No. 120.

## BEVEL WHEELS.

 $1\frac{1}{2}$  INCH PITCH.

No.	Diameter.		Cogs.	Face.	Remarks.
	FT.	IN.		INCHES	
34	2	0	50	3	} Pair.
35	1	5	35	3	
44	0	$9\frac{3}{4}$	20	$1\frac{1}{2}$	} Pair.
45	0	$4\frac{1}{2}$	9	$1\frac{1}{2}$	
52	3	$7\frac{1}{4}$	90	3	} Pair.
53	0	$9\frac{1}{4}$	19	3	
66	10	0	252	$2\frac{5}{8}$	} Segment.
67	0	$11\frac{1}{2}$	24	$2\frac{5}{8}$	} Pair.
103	2	11	73	4	} Pair.
104	1	$3\frac{3}{4}$	33	4	
115	1	9	44	3	} Pair.
116	1	1	27	3	
165	3	9	94	4	} Pair.
166	0	9	19	4	
169	2	2	54	$3\frac{1}{2}$	} Pair.
170	0	$8\frac{3}{4}$	18	$3\frac{1}{2}$	
181	8	0	200	$2\frac{3}{4}$	} Segment.
182	0	$9\frac{1}{2}$	20	$2\frac{3}{4}$	} Pair.
205	9	10	248	2	} Segment.
206	1	$5\frac{1}{4}$	36	2	} Pair.
218	2	$10\frac{3}{8}$	72	$2\frac{3}{4}$	} Pair.
219	0	$6\frac{1}{4}$	13	$2\frac{3}{4}$	
225	1	5	35	3	} Pair.
226	0	10	21	3	
249	2	0	50	$3\frac{1}{2}$	} Pair.
250	1	7	40	$3\frac{1}{2}$	
287	2	$3\frac{3}{8}$	57	$2\frac{1}{2}$	} Pair.
288	1	$0\frac{1}{8}$	25	$2\frac{1}{2}$	
295	2	5	60	$3\frac{1}{2}$	} Pair.
296	1	5	35	$3\frac{1}{2}$	

**BEVEL WHEELS.** $1\frac{1}{2}$  INCH PITCH.

No.	Diameter.		Cogs.	Face.	Remarks.
	FT.	IN.		INCHES	
328	1	$11\frac{1}{2}$	49	$3\frac{1}{4}$	} Pair.
329	1	$3\frac{1}{4}$	33	$3\frac{1}{4}$	
338	2	0	50	3	} Pair.
339	1	0	25	3	
350	2	5	60	$3\frac{1}{2}$	} Pair.
351	0	$7\frac{1}{4}$	15	$3\frac{1}{2}$	
362	2	$2\frac{5}{8}$	55	$3\frac{1}{2}$	} Pair.
363	0	$10\frac{3}{4}$	22	$3\frac{1}{2}$	
364	2	5	60	$3\frac{1}{2}$	} Pair.
365	0	$8\frac{1}{4}$	17	$3\frac{1}{2}$	
366	2	$8\frac{1}{4}$	66	4	} Pair.
367		$8\frac{3}{4}$	18	4	

 $1\frac{7}{16}$  INCH PITCH.

342	2	0	52	$3\frac{3}{8}$	} Pair.
343	0	$6\frac{1}{2}$	14	$3\frac{3}{8}$	

## BEVEL WHEELS.

 $1\frac{1}{4}$  INCH PITCH.

No.	Diameter.		Cogs.	Face.	Remarks.
	FT.	IN.			
73	1	6	45	$2\frac{1}{2}$	} Pair.
74	0	10	25	$2\frac{1}{2}$	
81	3	0	90	4	} Pair.
82	1	0	30	4	
105	1	6	45	4	} Pair.
106	0	10	25	4	
147	1	6	45	$2\frac{1}{4}$	} Pair.
148	1	$1\frac{1}{4}$	33	$2\frac{1}{4}$	
149	2	$8\frac{1}{2}$	81	$2\frac{1}{4}$	} Pair.
150	2	2	65	$2\frac{1}{4}$	
171	1	4	40	$2\frac{1}{2}$	} Pair.
172	0	$6\frac{3}{4}$	17	$2\frac{1}{2}$	
183	2	6	75	3	} Pair.
184	0	$6\frac{3}{4}$	17	3	
259	1	8	50	3	} Pair.
260	0	$6\frac{3}{4}$	17	3	
305	2	$7\frac{1}{2}$	79	3	} Pair.
306	1	2	35	3	
314	1	$6\frac{1}{4}$	45	3	} Pair.
315	1	$4\frac{1}{8}$	40	3	
326	1	$0\frac{1}{8}$	30	3	} Pair.
327	0	$4\frac{1}{8}$	10	3	
330	2	0	60	3	} Pair.
331	1	0	30	3	

## BEVEL WHEELS.

1 INCH PITCH.

No.	Diameter.		Cogs.	Face.	Remarks.
	FT.	IN.		INCHES	
30	1	4	50	$2\frac{1}{4}$	} Pair.
31	0	8	25	$2\frac{1}{4}$	
40	1	0	38	2	} Pair.
41	0	8	25	2	
56	2	0	75	$1\frac{7}{8}$	} Pair.
57	0	10	32	$1\frac{7}{8}$	
107	1	0	38	$2\frac{1}{2}$	} Pair.
108	0	10	31	$2\frac{1}{2}$	
139	1	$5\frac{1}{4}$	56	$1\frac{1}{8}$	} Pair.
140	0	$3\frac{3}{4}$	12	$1\frac{1}{8}$	
257	1	$8\frac{1}{2}$	63	$1\frac{1}{2}$	} Pair.
258	0	8	25	$1\frac{1}{2}$	
324	1	$11\frac{1}{2}$	75	$2\frac{5}{8}$	} Pair.
325	0	$4\frac{5}{8}$	15	$2\frac{5}{8}$	
411		$3\frac{7}{8}$	12	$\frac{3}{4}$	} Pair.
412		3	9	$\frac{3}{4}$	

 $\frac{7}{8}$  INCH PITCH.

384	8	33	$1\frac{1}{2}$	} Pair.
385	6	25	$1\frac{1}{2}$	

## BEVEL WHEELS.

 $\frac{3}{4}$  INCH PITCH.

No.	Diameter		Cogs.	Face.	Remarks.
	FT.	IN.			
334	1	0	51	$1\frac{1}{2}$	} Pair.
335	0	4	17	$1\frac{1}{2}$	
378		$3\frac{9}{16}$	15	$1\frac{1}{2}$	} Pair.
379		$5\frac{15}{16}$	25	$1\frac{1}{2}$	
380		11	46	$1\frac{3}{4}$	} Pair.
381		4	17	$1\frac{3}{4}$	
382		8	32	2	} Pair.
383		4	16	2	
384		8	33	$1\frac{1}{2}$	} Pair.
385		6	25	$1\frac{1}{2}$	
413		$2\frac{3}{8}$	14	$1\frac{3}{4}$	} Pair.
414		7	29	$1\frac{3}{4}$	
415	11	$9\frac{1}{2}$	558	2	} Segment.
416		$7\frac{5}{8}$	32	2	
437		$2\frac{7}{8}$	12	$1\frac{1}{2}$	} Pair.
438	1	$2\frac{3}{8}$	60	$1\frac{1}{2}$	

 $\frac{5}{8}$  INCH PITCH.

376	$6\frac{1}{4}$	32	$1\frac{1}{8}$	} Pair.
377	$4\frac{3}{4}$	24	$1\frac{1}{8}$	
417	$3\frac{5}{8}$	18	$1\frac{1}{4}$	} Pair.
418	$8\frac{31}{32}$	45	$1\frac{1}{4}$	

**BEVEL WHEELS.** $\frac{9}{16}$  INCH PITCH.

No.	Diameter.		Cogs.	Face.	Remarks.
	FT.	IN.		INCHES	
419		$3\frac{3}{8}$	19	$1\frac{1}{8}$	} Pair.
420		$6\frac{3}{4}$	38	$1\frac{1}{8}$	

 $\frac{1}{2}$  INCH PITCH.

421		$6\frac{5}{16}$	40	$1\frac{1}{4}$	} Pair.
422		3	19	$1\frac{1}{4}$	
423		$6\frac{1}{8}$	38	$\frac{5}{8}$	} Pair.
424		$8\frac{9}{16}$	53	$\frac{5}{8}$	

 $\frac{7}{16}$  INCH PITCH.

425		$9\frac{3}{16}$	66	$1\frac{5}{8}$	} Pair.
426		$3\frac{9}{16}$	25	$1\frac{5}{8}$	

## BEVEL WHEELS.

 $\frac{5}{16}$  INCH PITCH.

No.	Diameter.		Cogs.	Face.	Remarks.
	FT.	IN.		INCHES	
427		$2\frac{9}{16}$	24	$\frac{9}{16}$	} Pair.
428		$1\frac{5}{16}$	12	$\frac{9}{16}$	
429		$5\frac{3}{8}$	50	1	} Pair.
430		$3\frac{13}{16}$	34	1	
431		$5\frac{1}{4}$	50	$\frac{13}{16}$	} Pair.
432		$3\frac{9}{16}$	34	$\frac{13}{16}$	

 $\frac{1}{4}$  INCH PITCH.

433	$3\frac{7}{16}$	44	$\frac{9}{16}$	} Pair.
434	$2\frac{1}{16}$	25	$\frac{9}{16}$	
435	$3\frac{3}{16}$	40	$\frac{5}{8}$	} Pair.
436	$1\frac{1}{2}$	12	$\frac{5}{8}$	

## MITRE WHEELS.

 $2\frac{3}{4}$  INCH PITCH.

No.	Diameter.		Cogs.	Face.	Remarks.
	FT.	IN.		INCHES	
33	3	$10\frac{5}{8}$	53	9	

 $2\frac{1}{2}$  INCH PITCH.

17	2	8	40	6	} Mortise. Pair,
18	2	8	40	6	
30	4	0	60	7	
31	2	0	30	6	
51	3	0	45	7	} Mortise. Pair.
52	3	0	45	7	

 $2\frac{1}{4}$  INCH PITCH.

13	1	$2\frac{3}{8}$	20	$3\frac{1}{2}$
16	2	6	42	6
23	2	0	33	$5\frac{1}{2}$

 $2\frac{1}{8}$  INCH PITCH.

9	1	6	26	3
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## MITRE WHEELS.

2 INCH PITCH.

No.	Diameter.		Cogs.	Face.	Remarks.
	FT.	IN.		INCH	
2	2	$4\frac{1}{4}$	45	$3\frac{1}{4}$	
4	2	$0\frac{1}{2}$	38	$3\frac{1}{8}$	
12	3	0	56	4	
14	3	$6\frac{1}{4}$	66	5	
22	1	10	34	4	
32	3	0	56	5	
34	1	$7\frac{1}{4}$	30	$4\frac{1}{2}$	} Mortise. } Pair.
35	1	$7\frac{1}{4}$	30	$4\frac{1}{2}$	
38	2	6	47	4	

 $1\frac{7}{8}$  INCH PITCH.

36	1	0	20	4	} Mortise. } Pair.
37	1	0	20	4	
53	1	0	20	4	

 $1\frac{3}{4}$  INCH PITCH.

3	1	7	34	3	} Mortise. } Pair.
8	1	7	34	3	
15	2	0	43	5	
25	1	10	39	$4\frac{1}{2}$	
27	2	$0\frac{1}{4}$	43	3	

## MITRE WHEELS.

 $1\frac{5}{8}$  INCH PITCH.

No.	Diameter.		Cogs.	Face.	Remarks.
	FT.	IN.			
10	2	1	43	3	
11	1	$8\frac{3}{4}$	40	3	

 $1\frac{1}{2}$  INCH PITCH.

29	1	$8\frac{3}{4}$	43	$3\frac{1}{2}$	
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 $1\frac{1}{4}$  INCH PITCH.

7	1	4	40	$2\frac{3}{4}$	
21	1	0	30	$2\frac{1}{2}$	
24	1	$5\frac{1}{4}$	43	$2\frac{1}{4}$	

1 INCH PITCH.

1	1	$3\frac{1}{2}$	48	2	
26	0	10	31	2	

 $\frac{3}{4}$  INCH PITCH.

6	0	$9\frac{1}{4}$	40	$1\frac{1}{8}$	
39		$6\frac{1}{2}$	26	$1\frac{3}{4}$	
40		$4\frac{1}{2}$	18	$1\frac{1}{4}$	

## MITRE WHEELS.

 $\frac{5}{8}$  INCH PITCH.

No.	Diameter.		Cogs.	Face.	Remarks.
	FT.	IN.		INCHES	
41		$3\frac{7}{16}$	17	$1\frac{5}{16}$	
43		$4\frac{1}{16}$	20	$1\frac{1}{4}$	
54		6	30	$1\frac{3}{4}$	

 $\frac{1}{2}$  INCH PITCH.

42		$4\frac{9}{16}$	28	$1\frac{1}{8}$	
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 $\frac{7}{16}$  INCH PITCH.

44		$4\frac{3}{16}$	30	$\frac{15}{16}$	
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## MITRE WHEELS.

 $\frac{3}{8}$  INCH PITCH.

No.	Diameter.		Cogs.	Face.	Remarks.
	FT.	IN.		INCHES	
45		$3\frac{1}{8}$	26	$\frac{15}{16}$	
46		$2\frac{7}{8}$	24	$\frac{5}{8}$	
47		3	24	$\frac{3}{4}$	
55		$2\frac{5}{16}$	20	$\frac{5}{8}$	

 $\frac{5}{16}$  INCH PITCH.

48	$2\frac{9}{16}$	27	$\frac{1}{2}$
49	$1\frac{3}{4}$	18	$\frac{1}{2}$
50	$2\frac{5}{8}$	24	$\frac{5}{8}$

## FACE WHEELS.

No.	Diameter.		Cogs.	Pitch.	Face.	Remarks
	FT.	IN.			INCHES	
1	7	9 $\frac{1}{2}$	90	3 $\frac{1}{4}$	3 $\frac{1}{2}$	
2	7	0	75	3 $\frac{1}{2}$	3 $\frac{1}{2}$	
3	8	8	100	3 $\frac{1}{4}$	3 $\frac{1}{2}$	
4	5	0 $\frac{1}{2}$	63	3	3 $\frac{1}{2}$	
5	6	1	65	3 $\frac{1}{2}$	3 $\frac{1}{2}$	
6	6	1	70	3 $\frac{1}{4}$	3 $\frac{1}{2}$	

## INTERNAL SPUR WHEELS.

1	12	0	180	2 $\frac{1}{2}$	4 $\frac{1}{2}$	Segm't.
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## COURONNE WHEELS.

1	1	2 $\frac{5}{8}$	13	3 $\frac{1}{2}$	6 $\frac{3}{4}$
2	1	2 $\frac{3}{4}$	14	3 $\frac{1}{4}$	7 $\frac{1}{2}$
3	1	4 $\frac{3}{4}$	14	3 $\frac{3}{4}$	6 $\frac{3}{4}$
4	1	7 $\frac{1}{2}$	16	3 $\frac{3}{4}$	7
5	1	6 $\frac{1}{4}$	15	3 $\frac{3}{4}$	7
6	1	7 $\frac{3}{4}$	15	4 $\frac{1}{8}$	7 $\frac{3}{4}$
7	1	8	15	4 $\frac{1}{8}$	10
8	1	6 $\frac{1}{8}$	15	3 $\frac{3}{4}$	10

## RACKS.

No.	Length.		Pitch.	Face.	Remarks.
	FT.	IN.	INCHES	INCHES	
2	2	$4\frac{1}{2}$	2	3	
3	3	$4\frac{1}{4}$	$1\frac{3}{4}$	$2\frac{1}{4}$	
5	2	1	$1\frac{5}{8}$	$2\frac{3}{4}$	
6	2	0	$1\frac{1}{2}$	3	
7	1	$7\frac{3}{4}$	$1\frac{1}{2}$	2	
8	2	1	$1\frac{1}{4}$	$2\frac{1}{2}$	
9	2	1	$1\frac{1}{4}$	$2\frac{1}{4}$	
11	1	$7\frac{1}{2}$	$1\frac{3}{16}$	2	
22	3	0	$1\frac{1}{2}$	$2\frac{1}{2}$	
24	2	$6\frac{3}{4}$	$1\frac{1}{4}$	4	
26	2	$6\frac{1}{2}$	$1\frac{1}{2}$	2	
27	1	5	$1\frac{1}{8}$	3	
28	1	3	1	$2\frac{1}{2}$	
29	3	0	1	3	
30	5	0	$1\frac{1}{4}$	$3\frac{3}{4}$	
31	2	$2\frac{3}{4}$	$1\frac{3}{4}$	2	
32	4	0	$1\frac{1}{4}$	$3\frac{1}{2}$	
33	3	$6\frac{3}{4}$	$1\frac{3}{4}$	$1\frac{3}{4}$	
34	1	$7\frac{1}{4}$	$1\frac{1}{2}$	$1\frac{1}{2}$	
35	5	$10\frac{5}{8}$	2	$3\frac{1}{2}$	
36	4	$8\frac{1}{2}$	2	5	
37	2	$0\frac{1}{4}$	1	$1\frac{1}{2}$	
38	5	$3\frac{11}{16}$	2	3	

## CRANK WHEELS.

Diameter.		Rim.	Arms.	Remarks.
FT.	IN.	INCHES.		
6	9	4 square.	4	
4	11	4 by 3	4	
4	2	$3\frac{1}{2}$ by $2\frac{1}{2}$	4	
3	6	$2\frac{1}{2}$ square.	4	
3	0	2 by $2\frac{1}{2}$	4	
2	10	$2\frac{3}{4}$ square.	4	
2	1	$1\frac{3}{4}$ by $2\frac{1}{4}$	4	
2	0	3 by 2	4	
3	6	3 by $3\frac{1}{2}$	4	

## RATCHET WHEELS.

No.	Diameter.		Pitch.	Face.	Seg.	Remarks
	FT.	IN.		INCHES		
3	4	9	$\frac{5}{8}$	1	6	
4	7	0	$\frac{5}{8}$	1	6	
5	7	2	$\frac{5}{8}$	1	6	
6	4	$9\frac{1}{2}$	$\frac{5}{8}$	1	6	
7	5	6	$\frac{1}{2}$	$\frac{15}{16}$	6	
8	6	0	$\frac{1}{2}$	$\frac{5}{8}$	8	
12	2	8	$\frac{1}{2}$	$\frac{3}{4}$	1	Wheel. Segm't.
13	6	0	$\frac{7}{16}$	$\frac{7}{8}$	6	
14	5	2	$\frac{7}{16}$	$\frac{5}{8}$	8	
15	6	0	$\frac{5}{16}$	$\frac{7}{8}$	8	
16	5	2	$\frac{5}{16}$	1	8	
17	6	0	$\frac{3}{8}$	1	6	
18	5	6	$\frac{3}{8}$	1	6	
19	6	0	$\frac{5}{16}$	1	8	
20	5	0	$\frac{5}{16}$	$\frac{7}{8}$	8	

## RATCHET WHEELS.

No.	Diamet'r		Pitch.	Face.	Segmt	Remarks.
	FT.	IN.	INCHES	INCHES		
23	6	$11\frac{1}{2}$	$\frac{3}{4}$	$1\frac{3}{8}$	6	
24	5	2	$\frac{7}{16}$	$1\frac{1}{2}$	8	
25	5	$2\frac{1}{2}$	$\frac{1}{2}$	2	6	
28	5	9	$\frac{1}{2}$	2	6	
29	5	2	$\frac{1}{2}$	$1\frac{1}{4}$	6	
30	4	9	$\frac{7}{16}$	1	4	
31	2	$7\frac{1}{4}$	$\frac{5}{8}$	$1\frac{1}{2}$	1	Wheel.
32	5	6	$\frac{1}{2}$	2	6	Segment.
33	1	$3\frac{1}{4}$	$1\frac{1}{2}$	$1\frac{1}{4}$	1	Wheel.

## WORM WHEELS.

## WORMS.

No.	Diameter		Cogs.	Pitch.	Face.	Hand	Diam.	Length	Remarks
	FT.	IN.		IN.	IN.		IN.	IN.	
1	5	11 $\frac{5}{8}$	90	2 $\frac{1}{2}$	5 <sub>cur</sub>		11	10	
2	5	0	94	2	3	Right	8 $\frac{1}{2}$	8 $\frac{3}{4}$	
3	3	0 $\frac{1}{2}$	68	1 $\frac{5}{8}$	2 $\frac{1}{2}$	Left	5	6 $\frac{3}{8}$	
4	2	0 $\frac{1}{4}$	30	2 $\frac{1}{2}$	2 $\frac{3}{4}$				
5	2	0 $\frac{1}{4}$	60	1 $\frac{1}{4}$	3	Right	5 $\frac{1}{8}$	6	
6	2	0 $\frac{1}{4}$	60	1 $\frac{1}{4}$	3	Left	5 $\frac{1}{8}$	6	
7	1	11 $\frac{7}{8}$	37	2	2 $\frac{3}{4}$	Right	5 $\frac{1}{8}$	5 $\frac{3}{4}$	
8	1	11 $\frac{7}{8}$	37	2	2 $\frac{3}{4}$	Left	9 $\frac{1}{8}$	5 $\frac{3}{4}$	
9	1	4 $\frac{3}{8}$	34	1 $\frac{1}{2}$	3	Right	5 $\frac{1}{8}$	5 $\frac{3}{4}$	
10	1	2	22	2	1 $\frac{1}{2}$	"	5 $\frac{7}{8}$	5 $\frac{3}{4}$	
11	1	0 $\frac{3}{4}$	30	1 $\frac{5}{16}$	2 $\frac{1}{2}$	"	4 $\frac{5}{8}$	4 $\frac{1}{4}$	
12	1	0 $\frac{1}{4}$	19	2	2 $\frac{1}{2}$	"	4 $\frac{1}{2}$	6 $\frac{1}{4}$	
13		6 $\frac{1}{4}$	32	$\frac{5}{8}$	1 $\frac{3}{8}$	"	5 $\frac{1}{8}$	5 $\frac{3}{4}$	
							2 $\frac{3}{4}$	3	

## FLY WHEELS.

Diam.		Rim.	Arms.	Remarks.
FT.	IN.	INCHES.		
30	0	26 $\frac{3}{4}$ by 8	12	Centre & 12 Segm'ts.
30	0	26 $\frac{3}{4}$ by 4 $\frac{3}{4}$	12	Centre & 12 Segm'ts.
30	0	15 $\frac{1}{2}$ by 12	10	Centre & 10 Segm'ts.
25	0	15 by 10	10	Centre & 10 Segm'ts.
20	0	11 by 10 $\frac{3}{4}$	10	Centre & 10 Segm'ts.
20	0	10 $\frac{1}{2}$ by 9 $\frac{1}{2}$	0	Centre & 8 Segm'ts.
18	0	20 by 6 $\frac{1}{4}$	10	Centre & 10 Segm'ts.
18	0	10 $\frac{1}{4}$ by 6 $\frac{1}{4}$	10	Centre & 10 Segm'ts.
16	2	25 wide	6	Pulley rim.
14	2	20 wide	6	Segment pulley rim.
14	2	17 wide	6	Pulley rim.
14	2	9 by 6	6	Segment rim.
14	2	4 $\frac{1}{2}$ by 6 $\frac{1}{2}$	6	Centre & 6 Segm'ts.
14	0	18 by 5 $\frac{1}{4}$	8	Flat rim.
12	1 $\frac{1}{2}$	18 $\frac{1}{2}$ wide	6	Segment pulley rim.
12	1 $\frac{1}{2}$	8 by 6 $\frac{3}{4}$	6	Square rim.
12	1 $\frac{1}{2}$	4 $\frac{1}{4}$ by 5 $\frac{1}{2}$	6	Centre & 6 Segm'ts.
12	1 $\frac{1}{2}$	3 $\frac{5}{8}$ by 5	6	Square rim.
12	0	18 $\frac{1}{4}$ wide	6	Pulley rim.
10	1 $\frac{1}{2}$	16 wide	6	Pulley rim.
10	0	4 $\frac{1}{4}$ square	6	Arms & 6 Segments.
9	1 $\frac{1}{2}$	12 $\frac{1}{2}$ wide	6	Pulley rim.
9	1 $\frac{1}{2}$	4 $\frac{1}{2}$ by 6 $\frac{1}{2}$	6	Square rim.
9	1	7 $\frac{1}{2}$ by 5 $\frac{1}{2}$	6	Square rim.
8	1	15 wide	6	Pulley rim.
8	0	10 by 9	6	Flat rim.
7	1	15 wide	6	Pulley rim.
6	7	7 $\frac{1}{2}$ by 5 $\frac{1}{2}$	6	Square rim.
6	7	4 $\frac{3}{4}$ by 4 $\frac{1}{2}$	4	Oval rim.
6	2	body 4 by 4	4	Half oval rim.
6	1	12 wide	6	Pulley rim.
6	0 $\frac{3}{4}$	3 square	4	Square rim.

## FLY WHEELS.

Diam.		Rim.	Arms.	Remarks.
FT.	IN.	INCHES.		
6	0	$4\frac{1}{2}$ by 4	4	Oval rim.
6	0	16 by $1\frac{3}{4}$	6	Flat rim.
6	0	9 by $2\frac{1}{8}$	6	Flat rim.
5	8	6 by 6	4	Square rim.
5	7	$4\frac{1}{4}$ by $5\frac{1}{4}$	4	Flat rim.
5	0	$7\frac{1}{2}$ by 6	6	Flat rim.
5	0	6 by 6	6	Square rim.
5	0	4 diam.	6	Round rim.
5	0	5 by 6	4	Square rim.
4	6	$5\frac{1}{2}$ by $8\frac{1}{4}$	6	Square rim.
4	0	$5\frac{1}{2}$ by $6\frac{1}{2}$	6	Square rim.
4	0	$4\frac{3}{4}$ by $2\frac{3}{4}$	6	Flat rim.
4	0	$2\frac{1}{2}$ diam.	6	Oval rim.
3	0	$3\frac{3}{4}$ by 3	6	Flat rim.
3	0	$3\frac{3}{4}$ by 3	4	Square rim.
3	0	$2\frac{3}{4}$ diam.	4	Round rim.
3	0	3 by $3\frac{3}{4}$	8	Flat rim.
2	8	4 by 4	6	Square rim.
2	0	3 by 2	6	Flat rim.

## CLAMP BOXES.

No.	Diam. of Shaft.	Length of Bearing.	Width of Base.	Babbitt Metal.	Remarks.
1	$6\frac{3}{4}$	$9\frac{3}{8}$	$6\frac{7}{8}$	B	
2	$6\frac{1}{4}$	$8\frac{1}{4}$	$6\frac{7}{8}$	B	
3	$5\frac{3}{4}$	$12\frac{1}{4}$	$10\frac{1}{2}$	B	
4	$5\frac{1}{2}$	$8\frac{1}{2}$	8		
5	$5\frac{1}{4}$	$8\frac{1}{4}$	6	B	
6	$4\frac{3}{4}$	10	$7\frac{3}{4}$	B	
7	$4\frac{3}{4}$	$8\frac{1}{4}$	$5\frac{1}{2}$	B	
8	$4\frac{3}{4}$	$8\frac{1}{4}$	6		
9	$4\frac{1}{2}$	$12\frac{1}{4}$	$10\frac{1}{2}$	B	
10	$4\frac{1}{4}$	$7\frac{1}{4}$	6		
11	$4\frac{1}{4}$	$7\frac{3}{4}$	6	B	
12	$4\frac{1}{8}$	$10\frac{1}{8}$	7	B	
13	$3\frac{3}{4}$	$12\frac{1}{4}$	8	B	
14	$3\frac{3}{4}$	$8\frac{3}{8}$	6	B	
15	$3\frac{3}{4}$	$6\frac{3}{4}$	$5\frac{5}{8}$	B	
16	$3\frac{1}{2}$	$7\frac{1}{4}$	$5\frac{1}{8}$		
17	$3\frac{1}{2}$	$7\frac{1}{4}$	6	B	
18	$3\frac{3}{8}$	$9\frac{1}{4}$	5	B	
19	$3\frac{1}{4}$	7	5	B	
20	$3\frac{1}{4}$	6	5	B	
21	$3\frac{1}{8}$	$7\frac{1}{4}$	5	B	
22	3	$6\frac{1}{4}$	$4\frac{7}{8}$		
23	$2\frac{3}{4}$	8	$4\frac{1}{2}$	B	
24	$2\frac{3}{4}$	$7\frac{1}{2}$	$5\frac{1}{2}$		
25	$2\frac{3}{4}$	6	$4\frac{1}{8}$		
26	$2\frac{3}{4}$	$3\frac{1}{2}$	3		
27	$2\frac{5}{8}$	$8\frac{1}{4}$	6	B	
28	$2\frac{5}{8}$	6	$5\frac{1}{8}$	B	
29	$2\frac{3}{8}$	$7\frac{1}{4}$	6	B	
30	$2\frac{3}{8}$	6	$4\frac{3}{4}$	B	

## CLAMP BOXES.

No.	Diam. of Shaft.	Length of Bearing.	Width of Base.	Babbit Metal.	Remarks.
31	$2\frac{1}{4}$	$8\frac{1}{4}$	$4\frac{1}{2}$	B	
32	$2\frac{1}{4}$	$7\frac{3}{4}$	$4\frac{7}{8}$		
33	$2\frac{1}{4}$	$6\frac{1}{4}$	$4\frac{3}{4}$		
34	$2\frac{1}{4}$	5	$4\frac{1}{2}$		
35	$2\frac{1}{8}$	$5\frac{1}{8}$	$3\frac{5}{8}$	B	
36	$2\frac{1}{8}$	$6\frac{1}{2}$	5		
37	$2\frac{1}{8}$	$6\frac{3}{8}$	$5\frac{1}{8}$	B	
38	2	$6\frac{1}{4}$	$4\frac{5}{8}$		
39	2	$5\frac{1}{8}$	$4\frac{3}{8}$		
40	2	$4\frac{1}{2}$	$3\frac{7}{8}$		
41	2	$3\frac{1}{2}$	3		
42	$1\frac{7}{8}$	$8\frac{1}{4}$	$5\frac{1}{2}$	B	
43	$1\frac{7}{8}$	6	$4\frac{7}{8}$	B	
44	$1\frac{7}{8}$	$3\frac{5}{8}$	3		
45	$1\frac{3}{4}$	$7\frac{1}{4}$	5	B	
46	$1\frac{3}{4}$	$6\frac{1}{4}$	$4\frac{3}{4}$		
47	$1\frac{3}{4}$	$5\frac{1}{8}$	$4\frac{3}{8}$	B	
48	$1\frac{3}{4}$	$5\frac{1}{4}$	$4\frac{1}{2}$		
49	$1\frac{3}{4}$	5	4		
50	$1\frac{3}{4}$	$4\frac{1}{2}$	4		
51	$1\frac{3}{4}$	$3\frac{1}{2}$	3		
52	$1\frac{1}{2}$	$5\frac{1}{8}$	$4\frac{1}{2}$	B	
53	$1\frac{1}{2}$	4	3		
54	$1\frac{1}{2}$	$4\frac{1}{2}$	4		
55	$1\frac{1}{2}$	$3\frac{1}{2}$	3		
56	$1\frac{3}{8}$	$5\frac{1}{4}$	4		
57	$1\frac{3}{4}$	$4\frac{1}{4}$	$3\frac{1}{2}$	B	
58	$1\frac{3}{8}$	$3\frac{5}{8}$	$3\frac{1}{4}$		
59	$1\frac{1}{4}$	$4\frac{1}{2}$	4		

## CLAMP BOXES.

No.	Diam. of Shaft.	Length of Bearing.	Width of Base.	Babbitt Metal.	Remarks.
60	$1\frac{1}{4}$	$3\frac{1}{4}$	$2\frac{7}{8}$	B	
61	$1\frac{1}{4}$	3	$2\frac{3}{4}$		
62	1	$4\frac{1}{2}$	$3\frac{3}{4}$	B	
63	1	$3\frac{1}{4}$	$2\frac{3}{4}$		
64	$\frac{7}{8}$	$3\frac{1}{4}$	$2\frac{5}{8}$	B	
65	$\frac{5}{8}$	$2\frac{3}{8}$	$2\frac{1}{8}$		

## PEDESTALS.

No.	Diam of Shaft.	Length of Bearing	Height of Centre	Width of Base.	L'ngth of Base.	Re- m'rks
1	$13\frac{1}{2}$	$10\frac{3}{4}$	$10\frac{1}{8}$	$10\frac{3}{4}$	35	
2	$12\frac{1}{2}$	11	$6\frac{3}{4}$	11	$34\frac{1}{2}$	
3	$12\frac{1}{4}$	$7\frac{7}{8}$	$9\frac{1}{4}$	8	$34\frac{1}{2}$	
4	$11\frac{1}{2}$	$9\frac{5}{8}$	8	$9\frac{3}{4}$	30	
5	$11\frac{3}{8}$	$16\frac{1}{2}$	11	15	36	
6	11	$10\frac{1}{2}$	7	$10\frac{1}{4}$	28	
7	$10\frac{3}{8}$	7	$9\frac{1}{8}$	7	34	
8	$9\frac{3}{4}$	12	$9\frac{3}{4}$	12	34	
9	$9\frac{1}{4}$	10	8	$6\frac{1}{4}$	19	
10	$8\frac{1}{2}$	$7\frac{3}{4}$	$5\frac{7}{8}$	8	23	
11	$8\frac{1}{2}$	$14\frac{1}{4}$	$9\frac{5}{8}$	10	$30\frac{1}{2}$	
12	$8\frac{1}{8}$	$6\frac{3}{4}$	$6\frac{3}{4}$	$7\frac{3}{8}$	24	
13	$7\frac{1}{4}$	$8\frac{1}{8}$	$6\frac{7}{8}$	$10\frac{1}{4}$	28	
14	$7\frac{1}{8}$	$10\frac{1}{8}$	8	$8\frac{1}{2}$	27	
15	7	$8\frac{1}{4}$	$5\frac{1}{4}$	7	$18\frac{1}{2}$	
16	$6\frac{7}{8}$	6	$9\frac{1}{4}$	6	38	
17	$6\frac{7}{8}$	8	8	$8\frac{1}{4}$	28	
18	$6\frac{3}{4}$	$8\frac{1}{2}$	$12\frac{1}{4}$	$8\frac{3}{4}$	30	
19	$6\frac{3}{4}$	10	$6\frac{7}{8}$	$10\frac{1}{4}$	28	
20	$6\frac{5}{8}$	10	8	$8\frac{1}{2}$	27	
21	$6\frac{5}{8}$	14	$7\frac{3}{4}$	$11\frac{5}{8}$	$27\frac{1}{2}$	
22	$6\frac{5}{8}$	$9\frac{3}{4}$	7	$9\frac{3}{4}$	28	
23	$6\frac{1}{4}$	$8\frac{3}{8}$	$6\frac{1}{4}$	8	23	
24	$6\frac{1}{8}$	$7\frac{3}{4}$	$6\frac{3}{4}$	6	25	
25	6	$6\frac{1}{4}$	6	$6\frac{1}{2}$	28	
26	$5\frac{7}{8}$	$14\frac{1}{2}$	$7\frac{1}{4}$	$11\frac{5}{8}$	$27\frac{1}{2}$	
27	$5\frac{7}{8}$	$10\frac{5}{8}$	$6\frac{5}{8}$	9	23	
28	$5\frac{7}{8}$	$10\frac{5}{8}$	$5\frac{3}{4}$	9	$21\frac{1}{2}$	
29	$5\frac{3}{4}$	$7\frac{1}{2}$	$5\frac{1}{4}$	7	$23\frac{1}{2}$	
30	$5\frac{3}{4}$	$8\frac{1}{4}$	$6\frac{1}{4}$	8	23	
31	$5\frac{3}{4}$	8	$6\frac{1}{4}$	8	23	

## PEDESTALS.

No.	Diam of Shaft	Length of Bearing	Height of Centre	Width of Base,	Length of Base,	Re- m'arks
32	$5\frac{3}{4}$	7	$7\frac{1}{2}$	9	29	
33	$5\frac{5}{8}$	$7\frac{3}{4}$	$5\frac{1}{4}$	$6\frac{1}{2}$	23	
34	$5\frac{5}{8}$	$11\frac{3}{4}$	$8\frac{1}{8}$	10	24	
35	$5\frac{1}{8}$	7	$6\frac{3}{4}$	$6\frac{1}{2}$	28	
36	$5\frac{1}{8}$	$12\frac{5}{8}$	$5\frac{1}{4}$	9	$20\frac{1}{4}$	
37	5	$6\frac{5}{8}$	$4\frac{5}{8}$	$6\frac{3}{8}$	$20\frac{1}{2}$	
38	$4\frac{7}{8}$	$7\frac{1}{4}$	$5\frac{3}{4}$	7	$22\frac{1}{2}$	
39	$4\frac{7}{8}$	$17\frac{3}{8}$	$4\frac{5}{8}$	11	17	
40	$4\frac{3}{4}$	$11\frac{3}{4}$	$4\frac{5}{8}$	11	17	
41	$4\frac{3}{4}$	$10\frac{3}{4}$	5	9	$19\frac{3}{4}$	
42	$4\frac{1}{2}$	9	$5\frac{1}{2}$	7	$22\frac{1}{2}$	
43	$4\frac{1}{2}$	$6\frac{1}{4}$	$5\frac{1}{2}$	$5\frac{1}{2}$	21	
44	$4\frac{1}{4}$	$10\frac{3}{4}$	5	9	$19\frac{3}{4}$	
45	$4\frac{1}{4}$	$8\frac{1}{8}$	$6\frac{5}{8}$	6	$21\frac{1}{2}$	
46	$4\frac{1}{8}$	$6\frac{1}{8}$	6	5	25	
47	$4\frac{1}{8}$	5	$4\frac{1}{4}$	4	14	
48	4	6	6	5	25	
49	4	5	$4\frac{1}{4}$	4	14	
50	$3\frac{7}{8}$	$12\frac{3}{8}$	5	9	$19\frac{3}{4}$	
51	$3\frac{7}{8}$	6	$4\frac{7}{8}$	$5\frac{1}{2}$	19	
52	$3\frac{3}{4}$	$12\frac{3}{8}$	5	9	$19\frac{3}{4}$	
53	$3\frac{3}{4}$	$12\frac{3}{8}$	$5\frac{3}{8}$	9	22	
54	$3\frac{3}{4}$	9	$3\frac{1}{2}$	$9\frac{3}{4}$	19	
55	$3\frac{3}{4}$	8	$4\frac{5}{8}$	7	18	
56	$3\frac{3}{4}$	5	$4\frac{1}{4}$	5	18	
57	$3\frac{1}{4}$	11	$4\frac{1}{4}$	$8\frac{1}{2}$	$15\frac{1}{4}$	
58	$3\frac{1}{4}$	6	4	5	$15\frac{3}{4}$	
59	3	9	$3\frac{3}{4}$	8	$17\frac{1}{2}$	
60	$2\frac{3}{4}$	13	5	9	20	
61	$2\frac{3}{4}$	$9\frac{1}{8}$	$3\frac{7}{8}$	8	$15\frac{1}{4}$	

## PEDESTALS.

No.	Diam of Shaft	Length of Bearing	Height of Centre	Width of Base.	Length of Base.	Re- m'arks
62	$2\frac{3}{4}$	$7\frac{1}{4}$	$3\frac{5}{8}$	$5\frac{1}{4}$	16	
63	$2\frac{5}{8}$	15	$5\frac{3}{8}$	9	22	
64	$2\frac{5}{8}$	6	$4\frac{1}{2}$	6	$19\frac{1}{2}$	
65	$2\frac{1}{2}$	$8\frac{1}{4}$	$3\frac{1}{2}$	$4\frac{1}{2}$	16	
66	$2\frac{3}{8}$	$5\frac{1}{4}$	$3\frac{1}{8}$	5	15	
67	$2\frac{3}{8}$	$4\frac{1}{2}$	4	6	17	
68	$2\frac{1}{8}$	8	$2\frac{1}{2}$	$4\frac{1}{2}$	$12\frac{1}{2}$	
69	$1\frac{7}{8}$	4	$3\frac{1}{2}$	4	10	
70	$1\frac{5}{8}$	8	$2\frac{1}{2}$	$4\frac{1}{4}$	11	
71	$1\frac{5}{8}$	$5\frac{1}{2}$	$2\frac{1}{2}$	4	11	
72	$1\frac{1}{2}$	4	$3\frac{1}{2}$	4	10	
73	$1\frac{1}{4}$	5	$1\frac{3}{8}$	$4\frac{5}{8}$	5	

## GRATE BARS.

No.	Length.	Width of Opening.	Total width of Bar.	Remarks.
	IN.	IN.	IN.	
1	$61\frac{1}{2}$	$\frac{9}{16}$	$2\frac{3}{4}$	Single.
2	55	$\frac{3}{4}$	3	
3	39	$\frac{11}{16}$	$3\frac{1}{8}$	
4	$44\frac{7}{8}$	$\frac{7}{8}$	$4\frac{1}{4}$	
5	47	$\frac{7}{8}$	$4\frac{1}{4}$	
6	50	$\frac{1}{2}$	$2\frac{1}{2}$	
7	54	$\frac{3}{4}$	$3\frac{1}{8}$	
8	$54\frac{3}{4}$	$\frac{3}{8}$	2	
9	$44\frac{1}{2}$	$\frac{3}{8}$	$3\frac{1}{4}$	
10	37	$\frac{1}{2}$	$2\frac{1}{2}$	
11	39	$\frac{5}{8}$	$1\frac{5}{8}$	
12	$35\frac{7}{8}$	$\frac{3}{4}$	$3\frac{1}{8}$	
13	$40\frac{3}{4}$	$\frac{7}{16}$	$2\frac{7}{8}$	
14	54	$\frac{7}{8}$	$3\frac{1}{4}$	
15	42	$\frac{3}{4}$	3	
16	$37\frac{5}{8}$	$\frac{13}{16}$	$3\frac{1}{8}$	
17	$63\frac{1}{2}$	$\frac{5}{8}$	4	
18	36	$\frac{5}{8}$	$3\frac{3}{8}$	
19	$47\frac{3}{4}$	$\frac{5}{8}$	$2\frac{7}{8}$	
20	52	$\frac{7}{16}$	$2\frac{3}{4}$	
21	$59\frac{1}{2}$	$\frac{5}{8}$	$2\frac{3}{4}$	
22	30	$\frac{1}{2}$	$3\frac{3}{4}$	
23	$19\frac{11}{16}$	$\frac{7}{16}$	2	
24	$44\frac{7}{8}$	$\frac{3}{4}$	$2\frac{7}{8}$	
25	$64\frac{5}{8}$	$\frac{5}{8}$	3	
26	33	$\frac{1}{2}$	$2\frac{1}{4}$	
27	$59\frac{1}{2}$	$\frac{1}{2}$	$2\frac{1}{2}$	
28	$59\frac{1}{2}$	$\frac{3}{8}$	$2\frac{7}{8}$	
29	$25\frac{1}{4}$	$\frac{5}{16}$	$2\frac{1}{2}$	
30	$24\frac{3}{4}$	$\frac{1}{4}$	$2\frac{1}{4}$	

## GRATE BARS.

No.	Length.	Width of Opening.	Total width of Bar.	Remarks.
	IN.	IN.	IN.	
31	40 $\frac{1}{2}$	$\frac{5}{16}$	5 $\frac{1}{4}$	Tupper.
32	38 $\frac{3}{8}$	$\frac{13}{16}$	3 $\frac{1}{8}$	
33	60	$\frac{3}{8}$	5 $\frac{1}{4}$	Tupper.
34	66	$\frac{7}{16}$	2 $\frac{13}{16}$	
35	52	$\frac{3}{8}$	2 $\frac{1}{4}$	
36	60	$\frac{7}{16}$	5 $\frac{3}{8}$	Tupper.
37	32 $\frac{3}{4}$	$\frac{9}{16}$		Cir'lr, 6 pieces
38	24	$\frac{7}{16}$		Cir'lr, 2 pieces
39	23	$\frac{1}{2}$		Cir'lr, 2 pieces
40	24 $\frac{1}{2}$	$\frac{1}{4}$	2	
41	48 $\frac{1}{4}$	$\frac{3}{8}$	1 $\frac{3}{8}$	Single.
42	39 $\frac{1}{4}$	$\frac{7}{16}$		Cir'lr, 4 pieces
43	45 $\frac{1}{2}$	$\frac{3}{4}$	3 $\frac{1}{4}$	
44	37 $\frac{3}{4}$	$\frac{1}{4}$	1	Single.
45	33	$\frac{5}{16}$	2 $\frac{7}{8}$	
46	60 $\frac{1}{2}$	$\frac{5}{8}$	3	
47	71 $\frac{1}{2}$	$\frac{5}{16}$	2 $\frac{7}{8}$	
48	60 $\frac{1}{2}$	$\frac{5}{16}$	2 $\frac{1}{4}$	
49	36 $\frac{3}{4}$	$\frac{11}{16}$	2 $\frac{3}{4}$	
50	48 $\frac{1}{2}$	$\frac{5}{16}$	2 $\frac{1}{2}$	
51	33	$\frac{1}{2}$	10	} One end semi-circular } 2 pieces.
52	54	$\frac{5}{8}$	2 $\frac{7}{8}$	
53	39 $\frac{1}{4}$	$\frac{7}{16}$		Cir'lr, 4 pieces
54	28 $\frac{1}{2}$	$\frac{3}{8}$		Cir'lr, 2 pieces
55	34 $\frac{1}{4}$	$\frac{5}{8}$	1 $\frac{11}{16}$	Single.
56	39 $\frac{1}{2}$	$\frac{1}{2}$	1 $\frac{1}{4}$	Single.
57	45 $\frac{3}{4}$	$\frac{1}{2}$	1 $\frac{1}{4}$	} One end semi-circular } 30 pieces.
58	45	$\frac{3}{8}$	1 $\frac{1}{8}$	
59	33 $\frac{1}{4}$	$\frac{5}{8}$	1 $\frac{5}{8}$	Single.
60	53	$\frac{3}{4}$	2 $\frac{7}{8}$	

## GRATE BARS.

No.	Length.	Width of Opening.	Total width of Bar.	Remarks.
	IN.	IN.	IN.	
61	$31\frac{5}{8}$	$\frac{5}{8}$	$3\frac{1}{4}$	
62	24	$\frac{5}{8}$	$2\frac{7}{8}$	
63	24	$\frac{1}{2}$		Cir'lr, 2 pieces
64	$32\frac{3}{8}$	$\frac{5}{8}$	$1\frac{5}{8}$	Single.
65	$60\frac{1}{2}$	$\frac{7}{16}$	$2\frac{11}{16}$	
66	$37\frac{3}{4}$	$\frac{5}{8}$	$1\frac{5}{8}$	Single.
67	$65\frac{1}{2}$	$\frac{3}{4}$	$3\frac{1}{2}$	
68	$18\frac{5}{8}$	$\frac{3}{8}$	$1\frac{3}{4}$	
69	35	$\frac{5}{8}$	$1\frac{5}{8}$	Single.
70	31	$\frac{3}{8}$		Cir'lr, 3 pieces
71	70	$\frac{1}{2}$	$1\frac{1}{2}$	
72	57	$\frac{5}{8}$	$1\frac{5}{8}$	
73	24	$\frac{1}{2}$	3	Double bar.
74	$38\frac{3}{4}$	$\frac{3}{4}$	$1\frac{3}{4}$	
75	$13\frac{3}{4}$	$\frac{1}{2}$		Cir'lr, 2 pieces
76	$26\frac{1}{2}$	$\frac{3}{4}$	$1\frac{3}{4}$	
77	20	$\frac{5}{8}$	$1\frac{1}{2}$	
78	$30\frac{1}{4}$	$\frac{5}{8}$	$1\frac{5}{8}$	
79	$39\frac{5}{8}$	$\frac{1}{2}$	$2\frac{1}{2}$	Double bar.
80	48	$\frac{3}{4}$	3	Double bar.
81	$58\frac{1}{2}$	$\frac{1}{2}$	$1\frac{1}{8}$	Lock bar.
82	31	$\frac{1}{2}$	$2\frac{1}{8}$	Double bar.
83	$55\frac{1}{2}$	$\frac{1}{2}$	$1\frac{1}{8}$	Lock bar.
84	$52\frac{1}{2}$	$\frac{3}{8}$	1	Lock bar.
85	42	$\frac{3}{8}$	$1\frac{1}{8}$	Lock bar.
86	$31\frac{5}{8}$	$\frac{9}{16}$	$2\frac{9}{16}$	Double bar.
87	$35\frac{3}{4}$	$\frac{5}{8}$	$2\frac{7}{8}$	Double bar.
88	66	$\frac{1}{2}$	$1\frac{1}{8}$	Lock bar.
89	36	$\frac{5}{16}$ & $\frac{7}{16}$		Cir.in 16 pieces
90	$33\frac{1}{2}$	$\frac{3}{4}$	$3\frac{1}{8}$	Double bar.

## GRATE BARS.

No.	Length.	Width of Opening.	Total width of Bar.	Remarks.
	IN.	IN.	IN.	
91	71	$\frac{5}{8}$	$1\frac{5}{8}$	2 lengths.
92	$33\frac{1}{2}$	$\frac{1}{4}$	$\frac{7}{8}$	
93	$73\frac{1}{4}$	$\frac{1}{2}$	$1\frac{1}{2}$	2 lengths.
94	49	perforated.	7	Undergrate blower.
95	60	perforated.	7	Undergrate blower.
96	60	$\frac{3}{8}$	1	Lock bar.
97	22	$\frac{1}{2}$	$17\frac{1}{4}$	} 16 bars semi-circular on one end.
98				
99	$46\frac{1}{4}$	$\frac{3}{8}$	$2\frac{5}{8}$	Patent bar.
100	52	$\frac{5}{8}$	$1\frac{5}{8}$	Triple bar.
101	71	$\frac{7}{16}$	$1\frac{7}{8}$	Double bar 2 lengths.
102	72	$\frac{3}{8}$	1	Lock bar.
103	60	$\frac{1}{2}$	$1\frac{1}{8}$	Lock bar.
104	54	perforated.	6	Undergrate blower.
105	56	$\frac{9}{16}$	$1\frac{9}{16}$	
106	$42\frac{1}{4}$	$\frac{1}{2}$	$1\frac{3}{8}$	
107	54	$\frac{1}{4}$	$2\frac{1}{2}$	Double bar.
108	81	$\frac{1}{2}$	$1\frac{1}{2}$	2 lengths.
109	35	$\frac{5}{16}$		Cir'lr, 4 pieces.
110	60	$\frac{3}{8}$	1	Lock bar.
111	$39\frac{5}{8}$	$\frac{5}{8}$	$2\frac{3}{4}$	Double bar.
112	$47\frac{1}{4}$	$\frac{1}{4}$	$\frac{7}{8}$	2 lengths.
113	60	$\frac{5}{8}$	$1\frac{5}{8}$	2 lengths.
114	$33\frac{1}{2}$	$\frac{11}{16}$	$2\frac{1}{2}$	Double bar.
115	$75\frac{1}{2}$	$\frac{5}{8}$	$3\frac{1}{4}$	Double bar.
116	78	$\frac{3}{8}$	1	Lock bar.
117	$61\frac{1}{2}$	$\frac{5}{8}$	$1\frac{5}{8}$	
118	78	$\frac{5}{8}$	3	Double bar.
119	43	$\frac{1}{2}$	$1\frac{1}{2}$	
120	$35\frac{1}{2}$	$\frac{3}{8}$	$1\frac{3}{8}$	

## GRATE BARS.

No.	Length.	Width of Opening	Total width of Bar.	Remarks.
	IN.	IN.	IN.	
121	72	$\frac{3}{8}$	1	Lock bar.
122	$39\frac{5}{8}$	$\frac{3}{4}$	$3\frac{1}{4}$	Double bar.
123	58	$\frac{5}{8}$	3	Double bar.
124	$26\frac{1}{4}$	$\frac{1}{2}$	3	Double bar.
125	52	$\frac{1}{4}$	1	
126	28	$\frac{1}{2}$	$2\frac{1}{2}$	Double bar.
127	48	$\frac{1}{2}$	3	Double bar.
128	54	perforated.	7	Undergrate blower.
129	40 & $41\frac{1}{2}$			Cir. undergrate blower.
130	$49\frac{3}{4}$	$\frac{3}{8}$	1	Lock bar.
131	48	$\frac{3}{8}$	1	
132	$82\frac{3}{4}$	$\frac{3}{4}$	3	2-lengths.
133	$41\frac{1}{2}$	$\frac{5}{8}$	$2\frac{3}{4}$	Double bar.
134	84	$\frac{1}{2}$	$1\frac{1}{8}$	2 lengths, lock bar.
135	$50\frac{1}{2}$	$\frac{5}{8}$		Cir'lr, 10 pieces.
136	$40\frac{3}{4}$	$\frac{3}{8}$	$5\frac{1}{4}$	Tupper bar.
137	$38\frac{1}{8}$	$\frac{1}{16}$	$2\frac{1}{2}$	
138	$70\frac{3}{4}$	$\frac{3}{4}$	$1\frac{5}{8}$	2 lengths.
139	$70\frac{3}{4}$	$\frac{9}{16}$	$2\frac{7}{8}$	
140	$36\frac{1}{4}$	$\frac{1}{16}$	$2\frac{3}{4}$	
141	36	$\frac{3}{4}$	2	
142	$39\frac{1}{2}$	perforated.	$5\frac{1}{2}$	Undergrate blower.

## PROPELLER WHEELS.

No.	Diameter.		Pitch.		Angle.	Remarks.
	FT.	IN.	FT.	IN.		
1	7		10		66°	
2	7	6	11		65°	
3	7		10	6	64°	
4	6		15		51°	
5	6	6	14		56°	
6	8		16		58°	
7	6	2	14		55°	
8	7	6	15	3	57½°	
9	6		12	3	57°	
L. 10	10		19	6	58°	
L. 11	12		19		63½°	
12	8	6	14	6	62°	
13	6		9		64½°	
L. 14	12		17		66°	
L. 15	14	4	19	6	66°	
16	7	6	14		59½°	
L. 17	13		23	6	65°	
L. 18	14	4	21		65°	
L. 19	3		5	6	59°	
20	5	6	9		62°	
21	6	9	12		60½°	
L. 21	6	9	12		60½°	
22	7	9	12		64°	
23	14	3	16	6	69½°	
23	14	3	18	6	67½°	
24	6	6	10		63¾°	
L. 25	13		19	6	64°	
26	7		11		63°	
27	9	6	16	6	60½°	
28	7	3	13	6	59°	
L. 29	7	3	13	6	59°	
L. 30	10		19	6	58°	

## PROPELLER WHEELS.

No.	Diameter.		Pitch.		Angle.	Remarks.
	FT.	IN.	FT.	IN.		
31	14	10	18		68°	
L. 32	14	10	18		68°	
33	7	6	13	6	60°	
L. 34	7	6	11		65°	
35	7	6	11		65°	
36	4	2	7		62°	
37	2	4	3	9	63°	
38	8	9	14		63°	
39	4	10	8		62°	
40	5		8		63°	
L. 41	5		8		63°	
L. 42	12	6	22		61°	
43	3	10	4	6	69°	
44	8	6	13		64½°	
45	2	2	3		66°	
46	8	6	11		67°	
47	6		7		69½°	
L. 48	13	11	19	6	65½°	
49	6	4	11		61°	
50	3	6	5		65°	
L. 51	14	6	21		65°	
52	11	6	16	5	65½°	
43	6	4	9		64°	
54	11	6	15		67½°	
55	7	2	12	6	61°	
L. 56	14	10¼	22		65°	
57	10		14		66°	
58	8		13		62°	
59	3	10	7		60°	
R. 60	8	0	12	0	64½°	
R. 61	10	0	15	6	63½°	

## PROPELLER WHEELS.

No.	Diameter.		Pitch.		Angle.	Remarks.
	FT.	IN.	FT.	IN.		
R. 62	12	9	19	0	64°	
R. 63	4	3	5	3	69°	
R. 64	5	6	8	0	65°	
R. 65	1	6	2	3	64½°	
R. 66	8	0	13	11½	61½°	
R. 67	3	6	6	6	60°	
R. 68	6	9	11	8	61°	Composite.
R. 69	5	6	8	9	63½°	
R. 70	7	0	12	0	61½°	
R. 71	8	6	14	8	61°	Composite.
R. 72	4	9	6	0	65°	
R. 73	6	10	12	3	60°	
L. 74	6	10	12	3	60°	
R. 75	5	0	8	0	63°	
R. 76	3	0	4	3	65½°	
R. 77	4	3	5	3	69°	Composite.

## ROUND RIM HAND WHEELS.

Diam.	Kind of Arms.	Size of Rims.	Remarks.
28 $\frac{1}{2}$	6 oval.	1 $\frac{3}{4}$	
24 $\frac{1}{4}$	6 "	1 $\frac{1}{4}$	
24 $\frac{1}{4}$	6 "	1 $\frac{3}{4}$	
21	6 "	1	
14 $\frac{1}{4}$	5 curved.	2	
13	6 oval.	1	
10	6 "	$\frac{5}{8}$	
8	6 "	$\frac{7}{8}$	
8	5 curved.	1 $\frac{1}{4}$	
6	6 oval.	$\frac{3}{4}$	
5 $\frac{5}{8}$	4 flat cur'd	1	
5 $\frac{1}{4}$	4 oval.	$\frac{3}{4}$	
5	6 "	$\frac{3}{4}$	
4 $\frac{1}{2}$	6 "	$\frac{5}{8}$	
4	6 "	$\frac{5}{8}$	
4	6 "	$\frac{1}{2}$	
3 $\frac{1}{2}$	6 "	$\frac{7}{16}$	
2 $\frac{7}{8}$	6 "	$\frac{3}{8}$	
2 $\frac{1}{4}$	6 "	$\frac{5}{16}$	
18	6 "	1 $\frac{1}{8}$	
20	6 "	1 $\frac{1}{4}$	
36	6 "	1 $\frac{5}{8}$	
22	6 ov'l dish'd	1 $\frac{1}{4}$	
18	6 "	1 $\frac{5}{8}$	
13 $\frac{1}{4}$	4 "	1 $\frac{1}{2}$	
13	6 "	1 $\frac{1}{2}$	
10	4 "	1 $\frac{1}{4}$	
8	4 "	1	
6 $\frac{1}{4}$	4 oval.	$\frac{7}{8}$	

## OCTAGON RIM HAND WHEELS.

Diam.	Kind of Arms.	Size of Rim.	Remarks.
20	6 oval.	$1\frac{5}{8}$	
$16\frac{1}{4}$	4 flat.	$1\frac{3}{8}$	
$15\frac{1}{2}$	6 oval.	$1\frac{3}{4}$	
$14\frac{5}{8}$	5 flat cur'd	$1\frac{1}{2}$	
12	6 oval.	$1\frac{1}{2}$	
12	6 “	$1\frac{1}{2}$	
10	5 “	$1\frac{1}{8}$	
10	4 “	$1\frac{1}{4}$	
$8\frac{7}{8}$	4 flat.	$\frac{7}{8}$	
$8\frac{1}{4}$	5 “	$1\frac{1}{4}$	
7	4 “	$\frac{3}{4}$	
48	6 oval.	$1\frac{3}{4}$	

## WHOLE PULLEYS.

DISCOUNT: { Finished and Balanced, per cent.  
 { Unfinished Castings, per cent.

SUBJECT TO CHANGE WITHOUT NOTICE.

DIAMETER IN INCHES.	WIDTH BELT IN INCHES.	PRICE.	DIAMETER IN INCHES.	WIDTH BELT IN INCHES.	PRICE.
4	2	\$0 80	8	4	\$2 00
	3	90		5	2 15
	4	1 05		6	2 40
	5	1 20		8	2 80
5	2	90	9	10	3 30
	3	1 05		2	1 75
	4	1 15		3	2 00
	5	1 36		4	2 25
6	6	1 56	10	5	2 50
	2	1 12		6	2 75
	3	1 36		8	3 25
	4	1 44		10	3 84
7	5	1 60	11	2	2 10
	6	1 70		3	2 30
	8	2 00		4	2 70
	2	1 28		5	2 90
8	3	1 53	11	6	3 10
	4	1 73		8	3 60
	5	1 90		10	4 15
	6	2 25		12	4 75
8	8	2 55	11	2	2 30
	2	1 50		3	2 60
	3	1 75		4	2 80

## WHOLE PULLEYS.

DIAMETER IN INCHES.	WIDTH BELT IN INCHES.	PRICE.	DIAMETER IN INCHES.	WIDTH BELT IN INCHES.	PRICE.
11	5	\$3 00	14	10	\$5 80
	6	3 40		12	6 60
	8	4 00		14	7 30
	10	4 75	15	2	2 80
	12	5 40		3	3 20
12	2	2 40		4	3 70
	3	2 85		5	3 90
	4	3 08		6	4 40
	5	3 40		8	5 40
	6	3 60		10	6 50
	8	4 40		12	7 50
	10	5 10		14	8 20
	12	5 90	16	2	2 90
	14	6 85		3	3 50
13	2	2 50		4	3 90
	3	2 90		5	4 30
	4	3 20		6	4 70
	5	3 50		8	5 60
	6	4 00		10	7 20
	8	4 80		12	8 10
	10	5 40		14	9 30
	12	6 50	17	2	3 15
	14	7 00		3	3 70
14	2	2 60		4	4 00
	3	3 00		5	4 55
	4	3 50		6	5 30
	5	3 80		8	6 40
	6	4 20		10	7 40
	8	5 10		12	8 50

## WHOLE PULLEYS.

DIAMETER IN INCHES.	WIDTH BELT IN INCHES.	PRICE.	DIAMETER IN INCHES.	WIDTH BELT IN INCHES.	PRICE.
17	14	\$9 70	21	4	\$4 80
18	2	3 40		5	5 60
	3	3 90		6	6 40
	4	4 10		8	7 80
	5	4 80		10	9 50
	6	5 40		12	11 20
	8	6 70		14	13 44
	10	7 90		16	15 81
	12	9 50	22	3	4 20
	14	10 50		4	5 10
	16	11 70		5	5 90
19	3	4 00		6	6 60
	4	4 30		8	8 00
	5	5 10		10	10 00
	6	5 85		12	11 75
	8	7 10		14	13 90
	10	8 40		16	16 80
	12	9 68	23	3	4 60
	14	11 25		4	5 53
	16	12 87		5	6 00
20	3	4 05		6	7 05
	4	4 60		8	8 60
	5	5 50		10	10 65
	6	6 00		12	12 69
	8	7 50		14	15 60
	10	8 95		16	18 76
	12	10 40	24	3	5 30
	14	12 00		4	5 80
	16	14 00		5	6 20
21	3	4 10		6	7 35

## WHOLE PULLEYS.

DIAMETER IN INCHES.	WIDTH BELT IN INCHES.	PRICE.	DIAMETER IN INCHES.	WIDTH BELT IN INCHES.	PRICE.
24	8	\$ 9 00	27	10	\$14 02
	10	11 25		12	16 33
	12	13 50		14	19 42
	14	16 84		16	23 49
	16	20 00		18	27 83
	18	24 00	28	3	6 85
25	20	28 90		4	7 40
	3	5 30		5	8 70
	4	6 10		6	9 80
	5	7 09		8	12 10
	6	8 00		10	14 70
26	8	9 82	29	12	17 50
	10	12 15		14	20 00
	12	14 56		16	23 75
	14	17 50		18	27 50
	16	21 35		4	7 65
	3	5 75	30	5	9 24
27	4	6 61		6	10 47
	5	7 59		8	12 42
	6	8 61		10	15 81
	8	10 00		12	18 66
	10	13 10		14	22 10
	12	15 50		16	25 80
27	14	18 40		18	29 10
	16	22 20		4	8 00
	18	25 85		5	9 75
	4	7 00		6	11 10
	5	8 00		8	13 70
	6	9 00		10	16 68
	8	11 39		12	18 90

## WHOLE PULLEYS.

DIAMETER IN INCHES.	WIDTH BELT IN INCHES.	PRICE.	DIAMETER IN INCHES.	WIDTH BELT IN INCHES.	PRICE.
30	14	\$23 00	33	20	\$38 49
	16	26 58		4	10 00
	18	30 00		5	11 27
31	4	8 70		6	14 20
	5	10 07		8	17 20
	6	11 40		10	20 00
	8	14 00		12	22 95
	10	17 00		14	26 55
	12	20 00		16	30 15
	14	23 48		18	34 00
	16	27 00		20	39 80
32	18	31 70	35	4	10 75
	4	9 00		6	14 80
	6	11 80		8	17 30
	8	14 60		10	20 50
	10	17 72		12	24 00
	12	20 79		14	27 22
	14	24 30		16	30 50
	16	27 78		18	34 80
	18	32 26	36	20	40 10
	20	36 00		4	11 30
	4	9 45		5	13 00
	5	10 90		6	15 40
	6	12 30		8	17 95
	8	15 00		10	21 10
	10	19 40		12	25 00
	12	21 40		14	28 40
33	14	24 90		16	32 00
	16	28 45		18	37 40
	18	33 37		20	43 00

## WHOLE PULLEYS.

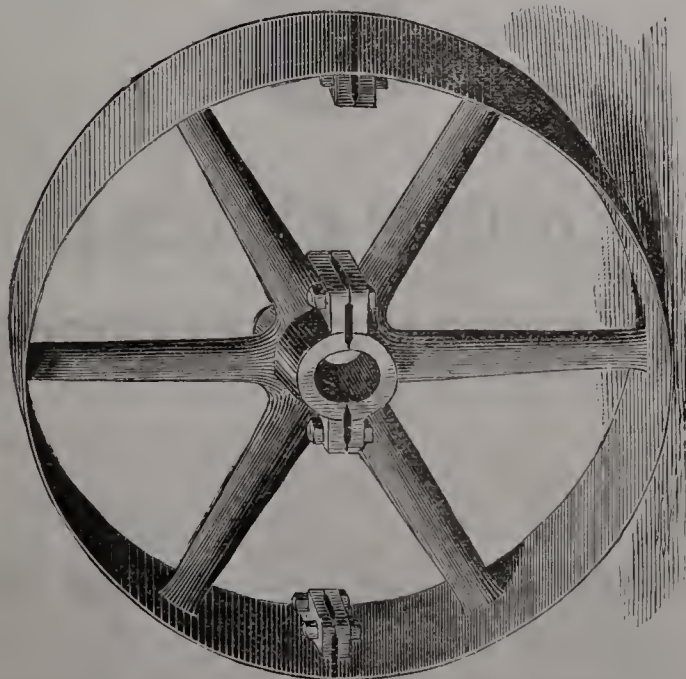
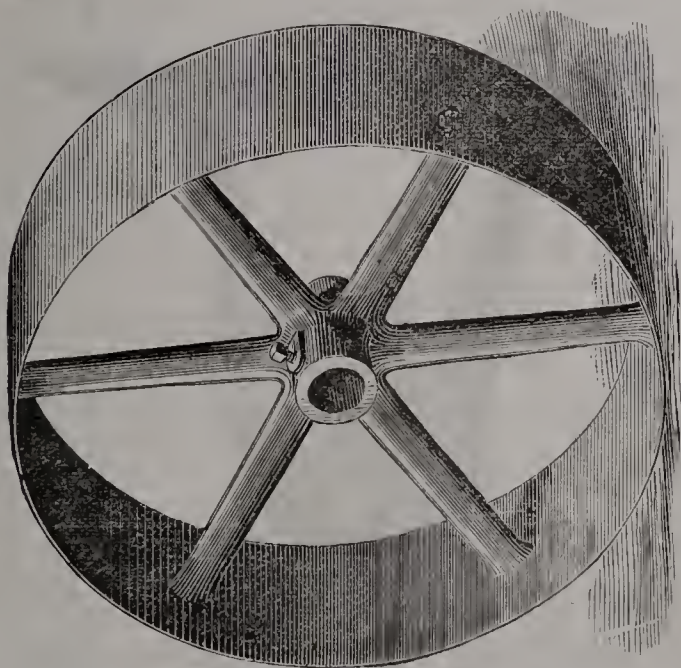
DIAMETER IN INCHES.	WIDTH BELT IN INCHES.	PRICE.	DIAMETER IN INCHES.	WIDTH BELT IN INCHES.	PRICE.
38	6	\$16 75	46	10	\$32 50
	8	19 67		12	36 00
	10	24 23		14	40 00
	12	29 00		16	46 00
	14	32 00		20	60 00
	16	35 50		6	24 75
	20	44 90		8	29 00
40	6	17 80	48	10	33 50
	8	22 26		12	37 50
	10	25 50		14	42 00
	12	30 50		16	49 00
	14	34 00		20	64 00
	16	37 50		22	72 80
	20	46 80		24	81 60
42	6	19 15	50	26	90 80
	8	23 00		6	28 50
	10	26 85		8	33 00
	12	31 38		10	36 80
	14	34 55		12	40 00
	16	38 00		14	44 10
	20	48 00		16	51 20
44	6	21 50	52	18	58 30
	8	25 00		20	68 50
	10	28 50		24	86 80
	12	32 50		6	32 90
	14	37 75		8	35 00
	16	42 50		10	39 00
	20	55 00		12	43 25
46	6	23 50		14	47 75
	8	27 50		16	54 50

## WHOLE PULLEYS.

DIAMETER IN INCHES.	WIDTH BELT IN INCHES.	PRICE.	DIAMETER IN INCHES.	WIDTH BELT IN INCHES.	PRICE.
52	18	\$62 00	66	14	\$76 28
	20	71 50		16	83 34
	24	90 50		18	92 80
54	8	39 50	72	20	103 00
	10	43 00		24	129 40
	12	47 00		12	73 50
	14	51 00		14	82 00
	16	58 00		16	93 85
	20	78 00		18	103 37
	24	96 00		20	114 58
	8	44 00		24	145 00
	10	48 00	78	10	97 00
56	12	51 40		12	105 00
	14	58 60		14	115 00
	16	65 80		16	123 50
	20	85 80		18	133 80
	24	105 50		20	142 00
60	8	47 00	84	24	167 00
	10	52 50		12	123 00
	12	58 50		14	134 00
	14	64 00		16	147 50
	16	70 00		18	160 00
	18	80 30		20	175 50
	20	90 20		24	198 50
	24	112 00		30	225 00
66	12	65 10			

OTHER SIZES OF PULLEYS FURNISHED TO ORDER.

PRICES ON APPLICATION.





**DOUBLE-BRACED  
BALL AND SOCKET HANGERS.**

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PRICE LIST,

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PAGE 105.

# SINGLE BRACED DOUBLE BRACED Ball and Socket Hangers.

DRUF.

Size.

6 in.	8 in.	10 in.	12 in.	13 in.	16 in.	18 in.	20 in.	25 in.	30 in.	36 in.
\$2 60	\$2 90	\$3 10	\$3 30	\$3 50	\$3 80	\$.....	\$.....	\$.....	\$.....	\$.....
1 <sup>16</sup> / <sub>3</sub>	3 00	3 50	3 75	3 85	4 20	.....	.....	.....	.....	.....
1 <sup>16</sup> / <sub>7</sub>	3 25	3 75	3 90	4 00	4 50	5 20	5 75	.....	.....	.....
1 <sup>16</sup> / <sub>11</sub>	3 50	4 25	4 50	4 60	5 70	5 85	6 00	.....	.....	.....
1 <sup>16</sup> / <sub>15</sub>	4 00	5 00	5 55	5 75	6 50	7 00	7 50	8 75	9 75	.....
1 <sup>16</sup> / <sub>19</sub>	4 50	6 50	.....	7 00	7 75	8 50	9 25	10 75	12 00	.....
2 <sup>16</sup> / <sub>3</sub>	6 25	7 50	.....	8 25	9 00	10 00	11 00	13 00	14 50	.....
2 <sup>16</sup> / <sub>7</sub>	.....	9 00	.....	10 25	11 50	12 70	13 75	16 00	17 50	.....
2 <sup>16</sup> / <sub>11</sub>	.....	12 25	.....	13 00	15 00	16 00	17 00	19 00	21 00	23 00
2 <sup>16</sup> / <sub>15</sub>	.....	15 25	.....	16 50	18 00	19 00	20 00	22 00	24 00	27 00
3 <sup>16</sup> / <sub>3</sub>	.....	18 80	.....	21 25	22 80	23 85	24 85	27 50	30 00	33 50
3 <sup>16</sup> / <sub>7</sub>	.....	.....	.....	26 70	28 25	28 90	29 50	32 00	35 00	40 00
3 <sup>16</sup> / <sub>11</sub>	.....	.....	.....	.....	34 50	35 75	37 00	41 10	44 85	48 10
4 <sup>16</sup> / <sub>7</sub>	.....	.....	.....	.....	43 50	45 90	48 50	53 50	59 25	66 50
4 <sup>16</sup> / <sub>11</sub>	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

## SHAFTS.

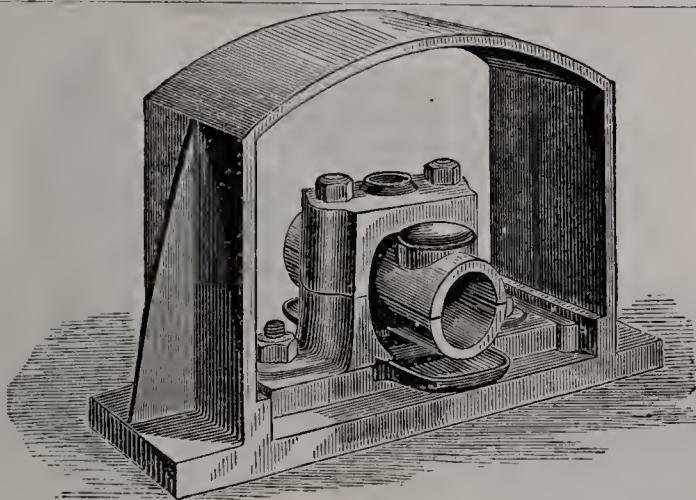
Size.	Price per Foot.	Size.	Price per Foot.	Size.	Price per Foot.
$\frac{1\frac{5}{16}}$	\$0 50	$2\frac{3}{16}$	\$1 10	$3\frac{15}{16}$	\$3 60
$1\frac{1}{16}$	55	$2\frac{7}{16}$	1 35	$4\frac{7}{16}$	4 75
$1\frac{3}{16}$	60	$2\frac{11}{16}$	1 60	$4\frac{15}{16}$	6 15
$1\frac{7}{16}$	75	$2\frac{15}{16}$	1 90	$5\frac{7}{16}$	9 00
$1\frac{11}{16}$	80	$3\frac{3}{16}$	2 25	$5\frac{15}{16}$	11 75
$1\frac{15}{16}$	97	$3\frac{7}{16}$	2 50	.....	.....

## COLLARS.

With either Square-Head or Slot-Head Set-Screws.

Size.	Price Each.	Size.	Price Each.	Size.	Price Each.
$\frac{1\frac{5}{16}}$	\$0 60	$2\frac{3}{16}$	\$1 88	$3\frac{15}{16}$	\$4 25
$1\frac{1}{16}$	68	$2\frac{7}{16}$	2 15	$4\frac{7}{16}$	5 00
$1\frac{3}{16}$	75	$2\frac{11}{16}$	2 50	$4\frac{15}{16}$	6 50
$1\frac{7}{16}$	1 00	$2\frac{15}{16}$	2 95	$5\frac{7}{16}$	8 00
$1\frac{11}{16}$	1 25	$3\frac{3}{16}$	3 25	$5\frac{15}{16}$	10 25
$1\frac{15}{16}$	1 50	$3\frac{7}{16}$	3 75	.....	.....

All prices given in this book are subject to change without notice.



## WALL-BOXES.

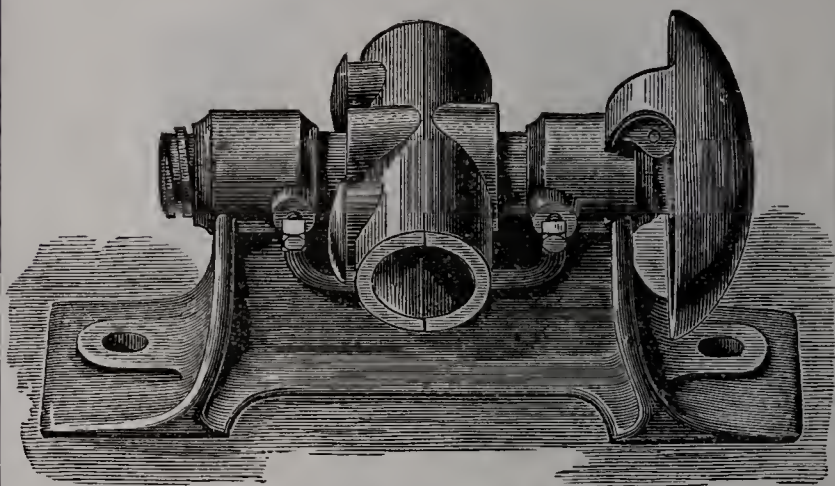
PRICES WITHOUT PILLOW-BLOCKS.

Size.	Price Each.	Size.	Price Each.	Size.	Price Each.	Size.	Price Each.
$1\frac{5}{16}$	\$0 60	$1\frac{15}{16}$	\$2 35	$3\frac{3}{16}$	\$5 95	$5\frac{7}{16}$	\$18 75
$1\frac{1}{16}$	70	$2\frac{3}{16}$	3 10	$3\frac{7}{16}$	7 25	$5\frac{15}{16}$	22 50
$1\frac{3}{16}$	85	$2\frac{7}{16}$	4 00	$3\frac{15}{16}$	9 25	$6\frac{15}{16}$	27 00
$1\frac{7}{16}$	1 30	$2\frac{11}{16}$	4 60	$4\frac{7}{16}$	11 00	$7\frac{15}{16}$	35 00
$1\frac{11}{16}$	1 65	$2\frac{15}{16}$	5 10	$4\frac{15}{16}$	14 00	.....	.....

WALL-BOXES and WALL-PLATES are same width as Bases of corresponding sizes of Pillow-Blocks.

## WALL-PLATES.

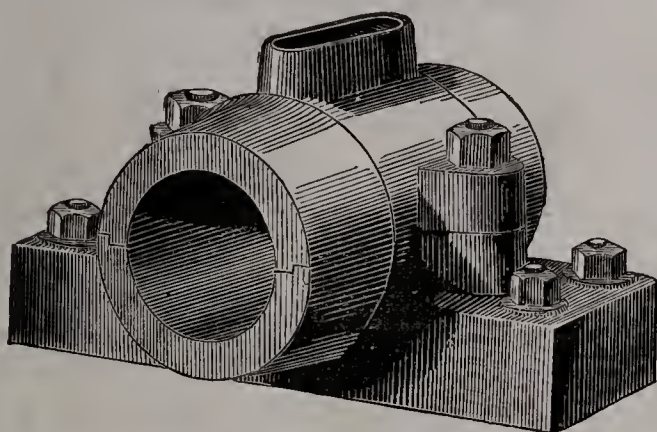
Size.	Price Each.	Size.	Price Each.	Size.	Price Each.	Size.	Price Each.
$1\frac{5}{16}$	\$0 40	$1\frac{15}{16}$	\$1 35	$3\frac{3}{16}$	\$3 45	$5\frac{7}{16}$	\$10 25
$1\frac{1}{16}$	45	$2\frac{3}{16}$	1 90	$3\frac{7}{16}$	4 10	$5\frac{15}{16}$	11 75
$1\frac{3}{16}$	50	$2\frac{7}{16}$	2 45	$3\frac{15}{16}$	5 70	$6\frac{15}{16}$	13 25
$1\frac{7}{16}$	75	$2\frac{11}{16}$	2 90	$4\frac{7}{16}$	6 00	$7\frac{15}{16}$	18 00
$1\frac{11}{16}$	97	$2\frac{15}{16}$	3 10	$4\frac{15}{16}$	7 35	.....	.....



## Ball and Socket Post-Hangers.

SIX INCHES TO CENTRE OF SHAFT.

Size.	Price Each.	Size.	Price Each.	Size.	Price Each.
$\frac{15}{16}$	\$2 90	$2\frac{7}{16}$	\$8 00	$4\frac{7}{16}$	\$28 50
$1\frac{3}{16}$	3 30	$2\frac{11}{16}$	9 60	$4\frac{15}{16}$	33 75
$1\frac{7}{16}$	3 75	$2\frac{15}{16}$	11 00	.....	.....
$1\frac{11}{16}$	4 20	$3\frac{3}{16}$	13 00	.....	.....
$1\frac{15}{16}$	5 00	$3\frac{7}{16}$	14 50	.....	.....
$2\frac{3}{16}$	6 25	$3\frac{15}{16}$	20 00	.....	.....



## FLAT BASE CLAMP-BOX

### PRICE LIST.

Diameter of Bore,	$\frac{15}{16}$	$1\frac{3}{16}$	$1\frac{5}{16}$	$1\frac{7}{16}$	$1\frac{11}{16}$	$1\frac{13}{16}$	$1\frac{15}{16}$
Length of Bearing,	$3\frac{1}{2}$	$3\frac{1}{2}$	$4\frac{1}{4}$	$4\frac{3}{4}$	$5\frac{3}{4}$	6	$6\frac{5}{8}$
Price per Box,	42	45	55	70	90	1 00	1 25

Diameter of Bore,	$2\frac{7}{16}$	$2\frac{11}{16}$	$2\frac{15}{16}$	$3\frac{3}{16}$	$3\frac{7}{16}$	$3\frac{15}{16}$	$4\frac{7}{16}$
Length of Bearing,	$7\frac{3}{4}$	$8\frac{3}{4}$	$9\frac{1}{2}$	10	11	12	13
Price per Box,	1 75	2 30	2 80	3 45	4 00	5 00	7 75

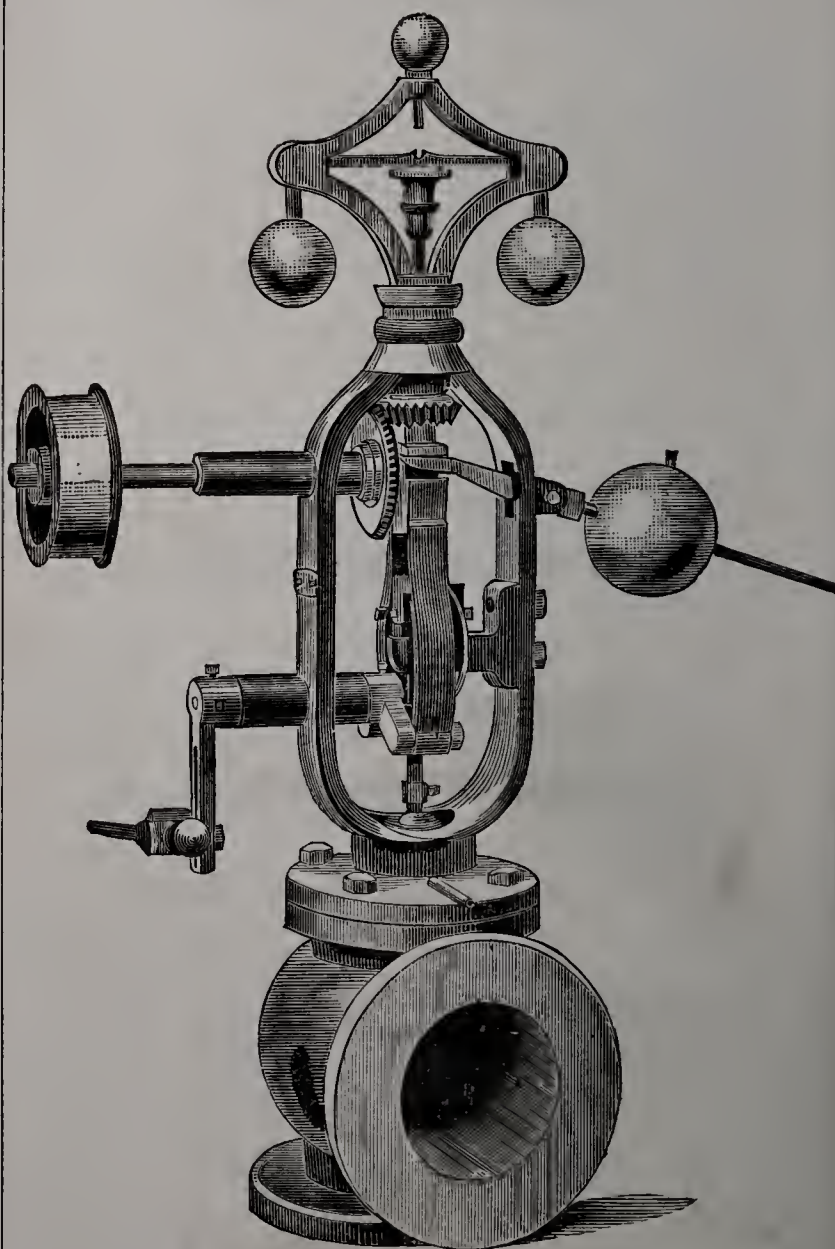
**PLATE COUPLINGS.**

Diameter of shaft.	Price per Pair.	Price for fitting one pair on shaft.	Diameter of shaft.	Price per Pair.	Price for fitting one pair on shaft.
$1\frac{3}{16}$	\$6 50	\$2 50	$2\frac{15}{16}$	\$18 50	\$3 50
$1\frac{7}{16}$	8 00	2 50	$3\frac{3}{16}$	22 00	4 00
$1\frac{11}{16}$	8 50	2 50	$3\frac{7}{16}$	25 00	4 50
$1\frac{15}{16}$	9 00	2 75	$3\frac{15}{16}$	32 50	6 00
$2\frac{3}{16}$	10 50	2 75	$4\frac{7}{16}$	40 00	8 00
$2\frac{7}{16}$	12 50	3 00	$4\frac{15}{16}$	48 00	10 00
$2\frac{11}{16}$	14 50	3 25	.....	.....	.....

**PATENT VISE COUPLINGS.**

Size.	Price per Piece.	Size.	Price per Piece.	Size.	Price per Piece.
$1\frac{3}{16}$	\$4 25	$2\frac{7}{16}$	\$10 75	$3\frac{15}{16}$	\$29 00
$1\frac{7}{16}$	5 00	$2\frac{11}{16}$	13 00	$4\frac{7}{16}$	40 00
$1\frac{11}{16}$	6 00	$2\frac{15}{16}$	16 50	$4\frac{15}{16}$	50 50
$1\frac{15}{16}$	8 00	$3\frac{3}{16}$	20 00	$5\frac{7}{16}$	60 00
$2\frac{3}{16}$	8 75	$3\frac{7}{16}$	23 00	$5\frac{15}{16}$	72 00

ALL PRICES  
GIVEN IN THIS BOOK  
ARE  
SUBJECT TO CHANGE  
WITHOUT NOTICE.



Tremper Cut-off.

**T R E M P E R ' S**  
**Combined Governor and Cut-off,**  
**FOR STEAM ENGINES,**  
MADE ONLY BY  
**THE PUSEY & JONES COMPANY,**  
**WILMINGTON, DELAWARE.**

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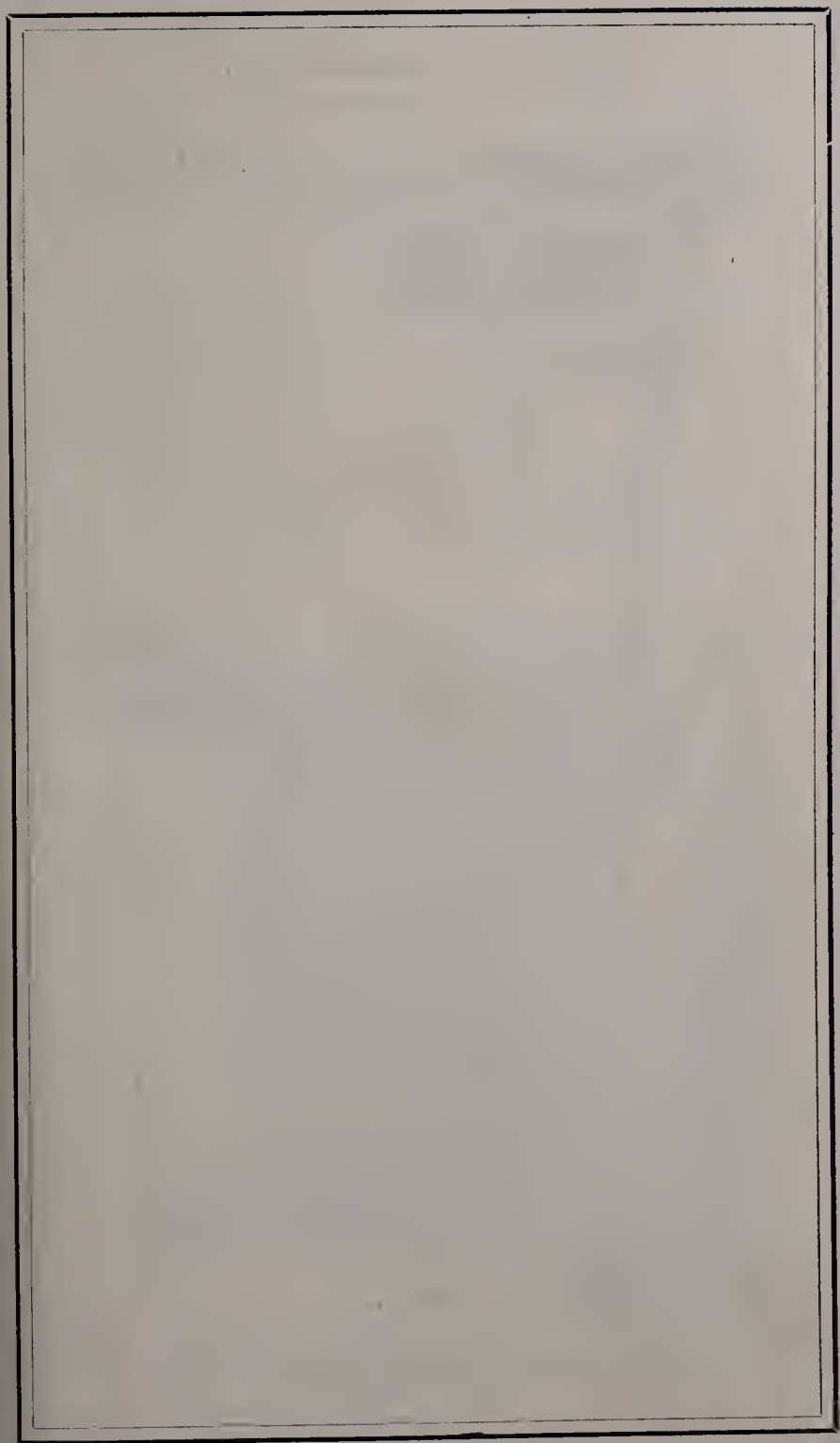
This combination having been applied to a large number of Steam Engines with a degree of success that establishes its superiority over all other Regulators now in use, we can, with confidence, recommend it to parties who wish to obtain for their Engines, UNIFORMITY OF SPEED AND ECONOMY OF FUEL. It can easily be applied to Engines of any size and construction, old or new: in fact, its great value has been best demonstrated where it has replaced other Governors on Engines which have been in use, and where care has been taken to compare the quantities of fuel used before and after its application. A saving of twenty per cent. or more may be relied upon in every instance, or a corresponding increase of power, with the same amount of fuel.

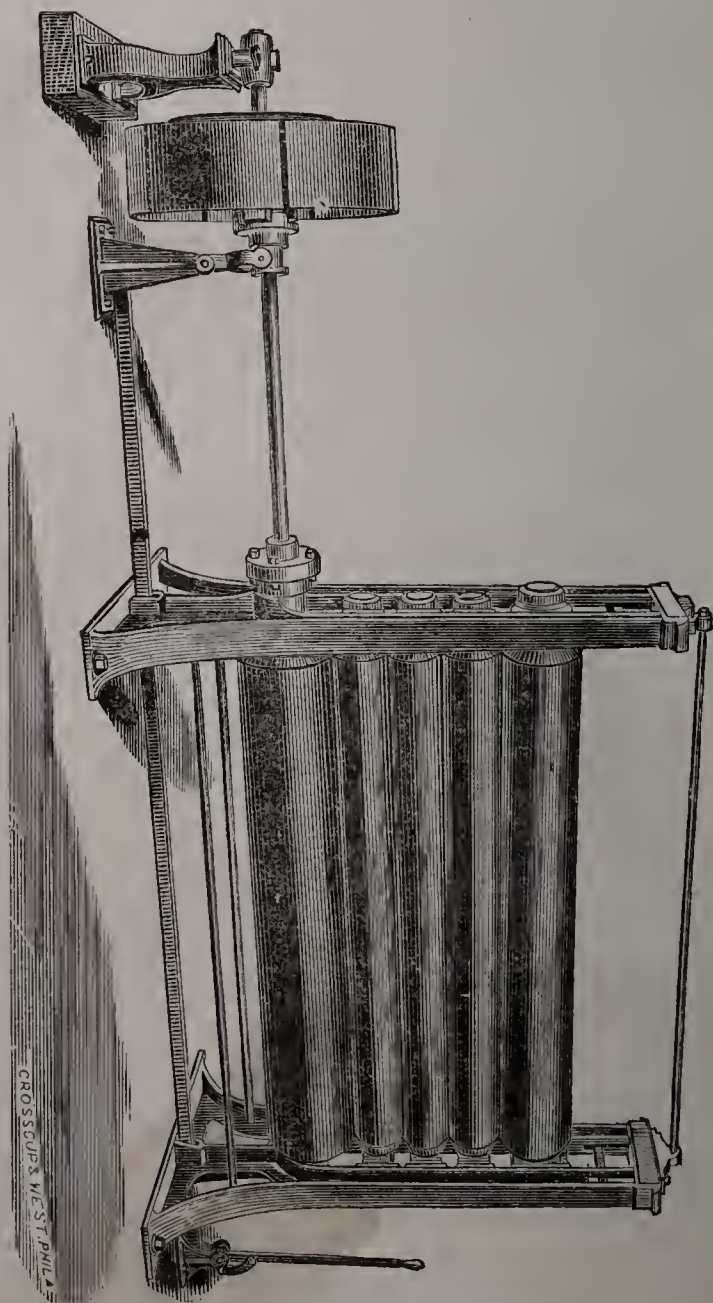
Whilst its compactness, neatness and durability, recommend it to all, its prominent feature is, that the Gov-

ernor determines the point of cut-off—each half stroke of the Engine—the proper amount of steam is thus admitted to the cylinder at the proper time, and in the most effective manner.

We would particularly call the attention of Steam Engine Builders to these improved Regulators which have been rapidly growing in public favor during the several years of their existence, as by using them, they simplify and cheapen the construction of their Engines, and secure to their customers a more satisfactory result than can be obtained from any other devise now known, especially in these two very important respects: Economy of Fuel, and Uniformity of Speed, even under very great and sudden variations of the load, or in the pressure of Steam.

A number of each size is kept constantly on hand, and all orders will receive prompt attention.





CALENDER ROLLS.

**THE PUSEY & JONES COMPANY,**  
**BUILDERS OF**  
**PAPER MACHINERY,**  
**ROTARY BOILERS,**  
**DIGESTERS,**  
AND ALL THE MACHINERY REQUIRED FOR  
**PAPER MILLS,**  
AND  
**CHEMICAL WOOD PULP WORKS.**

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We would respectfully invite the attention of owners of Paper Mills, and those contemplating the erection of them, to the facilities afforded by our establishment for the construction and repair of Paper Mill Machinery. We are prepared to furnish at short notice, of most approved design and construction, Cylinder and Fourdrinier Paper Machines of any required width, and comprising such parts as may suit the views and wishes of the purchaser, and can supply, of our own manufacture, Steam Engines and Boilers, Rotary Boilers, Washing and Beating Engines, Stuff Chests, Shafting, Pulleys, and all the iron work that may be required to equip a Mill complete.

Being the proprietors of a BRASS FOUNDRY, we are enabled to furnish Brass Castings of any ordinary character in a few hours after receipt of order. Brass Casings or Covers for iron Press Rolls, made and fitted on in the most substantial manner.

By the use of a very superior

**GRINDING MACHINE,**

constructed expressly to grind the various Rolls, comprising a Paper Machine, we are enabled to obtain a perfectly true surface. Each Roll is ground separately whilst revolving on its journals. A stack of Calenders, when ground in this manner and placed in position, fit so closely that they positively touch evenly from end to end, the advantages of which will be apparent to all who operate Calender Rolls.

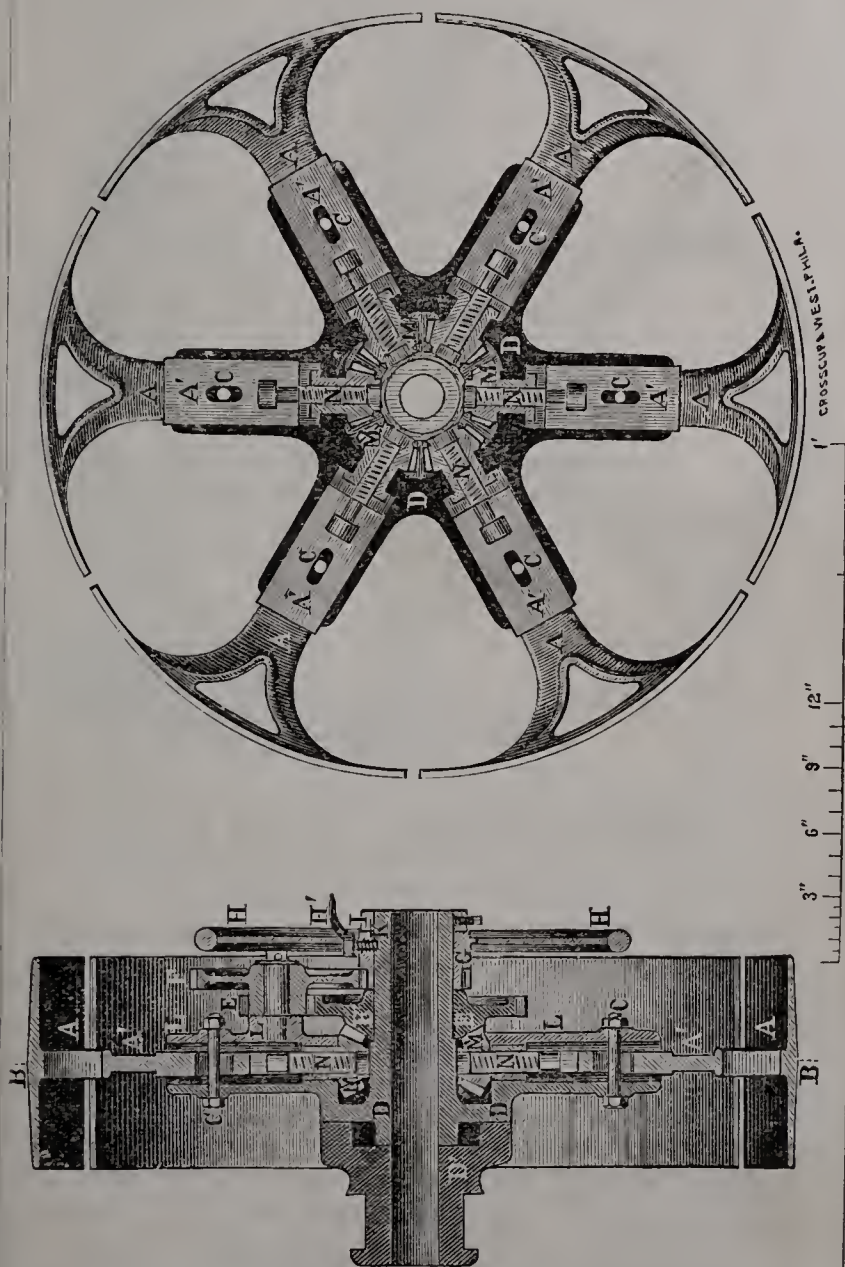
We solicit parties whose Calenders are in bad order to forward them on for repairs, the cost of which is very trifling: full satisfaction is warranted.

We are the sole manufacturers of

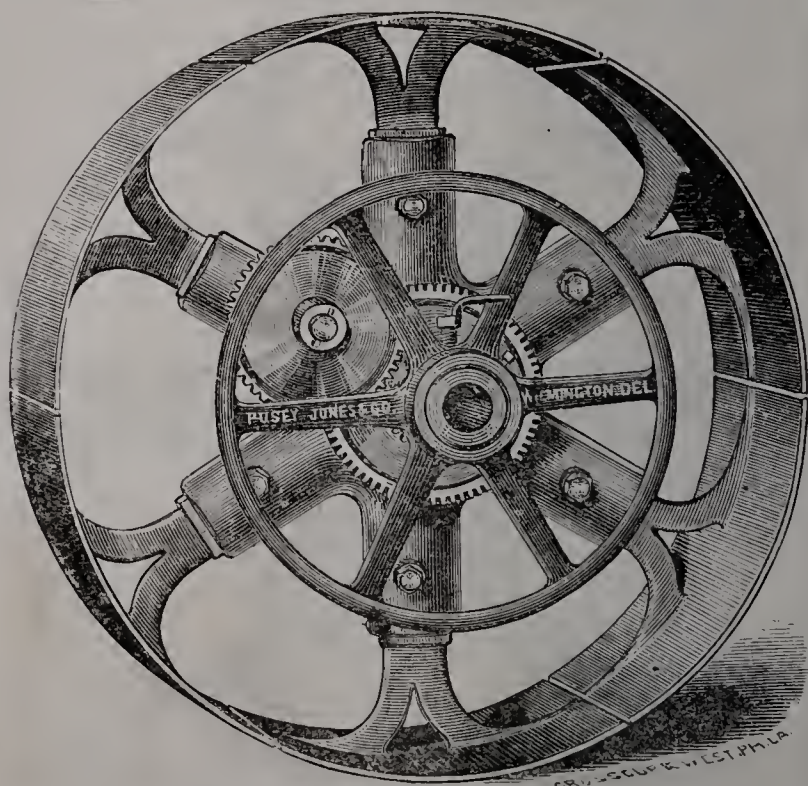
**LINDSAY'S PATENT APRON,**

pronounced the best in use—by means of which, when connected to the Deckel, the width of the paper may be changed by operating one handle. It is reliable and certain in its operation, free from complication, and has stood the test of years upon some of the best machines in the country.

The machine does not have to be stopped nor the paper broken when the width is changed: an actual expense is thus avoided of from three to seven dollars, owing to the character of the machine. The operator is enabled to make the trimmings as narrow as expedient, a constant source of economy to the proprietor.



### Sectional View of Expanding Pulley.



## EXPANDING PULLEYS FOR PAPER MACHINES.

We are the Patentees and Builders of a Pulley, constructed so that its diameter may be increased or diminished, whilst it is in motion.

The change in size is effected by applying the hand to a hand-wheel the rim of which is concentric with the Pulley Rim, and is accessible at all times. The movement requires but little effort, and the operator incurs no personal danger in making the adjustment. As these have been in use in some of the largest and best Paper Mills in the country, their durability and efficiency have been thoroughly tested, and they have demonstrated to

the purchasers, that they possess all the advantages claimed for them.

They are easily operated when loaded to their full capacity.

They can be locked in any position so that accidental change is impossible.

In all positions their rims run strictly true.

They are not liable to get out of order.

They secure a uniformity of product.

They effect a continual saving of paper.

They prevent the breaking of the paper.

Their cost is so low, it is within the reach of all.

They can be applied to any machine—new or old.

They are the only Expanding Pulleys yet made that have given satisfaction.

The adjustment of the speed of the various rolls by means of Lagging, has always proved expensive, unreliable and unsightly. The method is so objectionable and inconvenient that the machine tender will only undertake it when absolutely compelled to do it. The addition of lagging at one point of a Pulley Rim, unavoidably creates a slower movement of the roll at one point than another, always affecting and impairing the quality of the paper and frequently breaking it.

The employment of Expanding Pulleys lessens the labor of those in charge of the machine, and benefits the proprietors in so many ways, that every Paper Machine should have a full equipment of them.

They should be used for driving

COUCH ROLLS,

PRESS ROLLS,

DRYING CYLINDERS,

CALENDER ROLLS.

And in every place where a change of speed is desirable,

We endeavor to keep a full assortment of these Pulleys on hand, of sizes varying from 26 inches to 48 inches diameter, with Hubs constructed so they can be bored to suit any shaft of ordinary size.

For further information, address,

**THE PUSEY & JONES COMPANY,**  
WILMINGTON, DELAWARE.

## REFERENCES.

The following is a List of some of the Mills in which Expanding Pulleys may be seen in successful operation, and address of Proprietors :

Rockland Paper Mill,	Rockland, Delaware.
Augustine " "	Wilmington, "
Pioneer Co's " "	Athens, Georgia.
Atlantic Paper Co.,	Savannah, "
Mead & Nixon's Paper Mill,	Dayton, Ohio,
A.V. DuPont & Co's " "	Louisville, Ky.
Holyoke Paper Co's " "	Holyoke, Mass.
Whiting " " " "	Holyoke, "
Franklin " " " "	Holyoke, "
Union " " " "	Holyoke, "
Hampshire " " " "	So. Hadley Falls, Mass.
Carew " " " "	So. Hadley Falls, "
Smith Paper Co's " "	South Lee, Mass.
S. D. Warren & Co.,	Boston, "
Merwin & House, " "	Rainbow, Conn.
Cumberland " " "	Portland, Maine.
Marley " " "	Elkton, Md
Wheelwright, Mudge & Co.,	Baltimore, Md.
Taggart & Davis,	Watertown, N. Y.
Otsego Paper Co.,	Cooperstown, N. Y.
J. L. Riegel & Son,	Riegelsville, N. J.
Warren Manufacturing Co.,	Riegelsville, N. J.
Howard Lewis,	Delaware Co., Pa.
Martin Nixon,	Manayunk, Pa.
Thos. S. Marshal,	Chester Co., Pa.,
G. B. Connard & Co.,	Reading, Pa.
W. & A. Mode,	Coatesville, Pa.
John Shober,	Lancaster, Pa.
Spring Forge Paper Co.,	Spring Forge, Pa.
C. S. Garret & Son,	Philadelphia, Pa.
Nixon & Bro ,	Richmond, Ind.
Henry Paper Co.,	Henry, Ill.
J. B. Black,	Yorkville, Ill.
Bradnor, Smith & Co.,	Chicago, Ill.
George H. West,	Ballston Spa , N. Y.
Hoosic Woolen Mills,	Ann Arbor, Mich.
E. S. King & Co.,	Saratoga, Cal.
John Fisher & Son,	Dundas, Canada.
Eddystone Manuf'g Co.,	Chester, Pa.
Wellington Campbell,	Milburn, New Jersey.
P. H. Glatfelter,	Spring Forge, Pa.
W. M. Singerly,	Philadelphia, Pa.
Geo. W. Childs,	" "
James Osmond,	Atlanta, Georgia.
Talbot County Paper Mills Co.,	Easton, Md.
Wm. C. Hamilton & Son,	Philadelphia, Pa.
John A. Dushane & Co.,	Baltimore, Md.
Campbell, Hall & Co.,	New York, N. Y.

## BOILER WORK.



The subscribers are also prepared to make  
Marine Boilers,  
Return Flue Boilers,  
Return Tubular Boilers,  
Locomotive Boilers,  
Upright Boilers,  
Portable Engine Boilers,  
Dimpfel's Patent Boilers,  
Oil and Water Tanks, Smoke Stacks, &c., &c.,  
and all equipments for Boilers,  
Boiler Fronts, Grate Bars,  
Bearing Bars, Wall Binders,  
Safety Valves, Check Valves,  
Glass Water Gauges, Steam Gauges,  
Gauge Cocks, Hand and Power-Feed Water Pumps,  
Iron and Copper Steam and Water Pipe,  
Steam Pumps,  
Injectors,  
Rotary Boilers,  
Digesters,  
Tanks, and equipment complete, for  
Chemical Wood Pulp Works.

**THE PUSEY & JONES COMPANY,**

WILMINGTON, DELAWARE.

## The Little Wonder Injector.

---

It is the simplest and most reliable **Boiler Feeder** in the Market. It has no movable parts; is certain in its action; not affected by overheating; available as a Fire extinguisher; will feed direct from hot-well of a Condensing Engine; not affected by shocks or jars, and it **Dispenses with** the use of a **Heater**. In ordering, state size of Boiler and minimum and maximum pressure of steam.

### SAFETY CHECK VALVE.

Can be examined and repaired with steam on the Boiler. The above are manufactured by the owners of the Patents, the

**DELAWARE STEAM APPLIANCE COMPANY,**

And sold by

**THE PUSEY & JONES COMPANY,**

**WILMINGTON, DELAWARE.**

# INDEX.

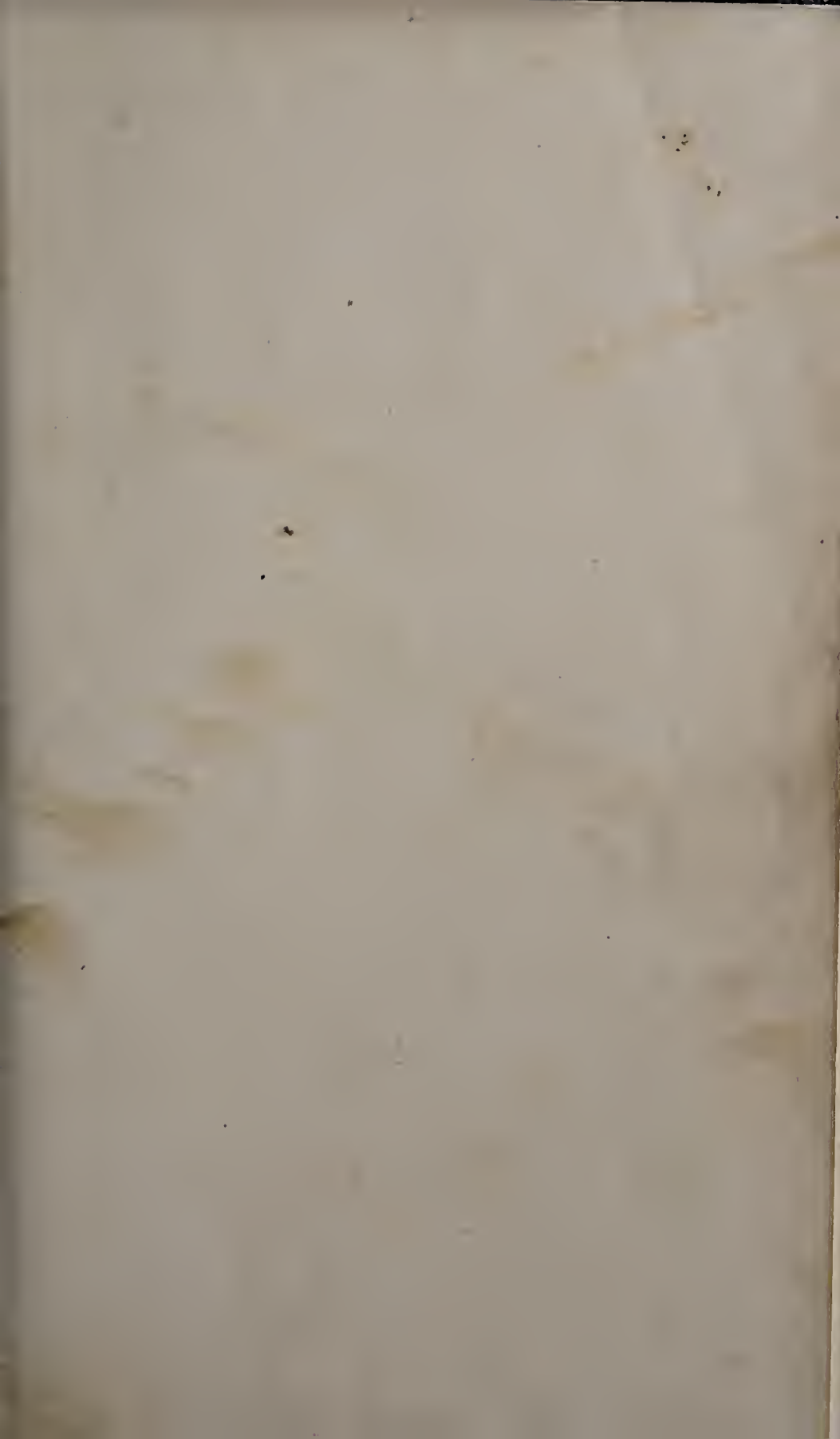
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Remarks .....	5
Spur Wheels .....	7
Bevel Wheels.....	48
Mitre Wheels.....	68
Face Wheels .....	73
Internal Spur Wheels .....	73
Couronne Wheels.....	73
Racks.....	74
Crank Wheels.....	75
Ratchet Wheels.....	75
Worm Wheels.....	77
Fly Wheels.....	78
Clamp Boxes.....	80
Pedestals .....	83
Grate Bars.....	86
Propeller Wheels.....	91
Round Rim Hand Wheels.....	94
Octagon Rim Hand Wheels.....	95
Pulleys .....	96
Double-braced Ball and Socket Hangers.....	104
Shafts .....	106
Collars.....	106
Wall-boxes.....	107
Wall-plates.....	107
Ball and Socket Post-Hangers.....	108
Flat Base Clamp Boxes.....	109
Plate Couplings.....	110
Patent Vise Couplings.....	110
Tremper's Combined Governor and Cut-off .....	112
Paper Machines.....	117
Machinery for Wood Pulp Works.....	117
Rotary Boilers.....	117
Digesters.....	117
Expanding Pulleys.....	119
List of References.....	122
Boiler Work.....	123
Injectors.....	124



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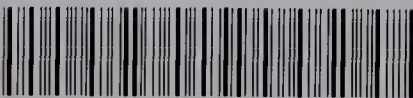








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